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THE MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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The Renovation of Worn-out Soils.

THE ABLE ESSAY OF THOMAS MOORE, FIRST PUBLISHED IN 1801. (CONTINUED FROM JANUARY NUMBER OF MD. FARMER, 1879.)

Let them reflect on the immense labour that has been bestowed in the Southern States, in the business of raising great hills about Indian corn. It is now acknowledged, with good reason, by many of the best planters, that it is altogether useless in promoting the growth of corn; but say they, it is absolutely necessary to raise a small hill, to prevent the corn from falling, by storms of wind and rain. Let us try the wisdom of this improved mode. Every one who has paid attention to the growth of corn, must have observed, that before, or about the time it arrives at the state of danger; it is sure to send out a circle of strong roots just at or a little above the surface; these are the supports of nature; and so well are they adapted to the purpose, that we seldom see a stalk torn up by the roots, except where the earth is previously washed from about them. If let alone, there is no other danger to be apprehended than from the breaking of the stalks, which indeed, sometimes happens, and which hilling does not prevent. If it is bent down by wind and rain, when the wind ceases and the blades are released from their burden of moisture, it will of course rise. But the officious planter must do something to assist nature. He accordingly raises a hill; how does it affect the plant? Let him observe it soon after, and he will discover he has mistaken his aim; that nature, feeling herself thwarted, is endeavouring to repair the injury, by retaining a part of the *nutritive juices* provided for the support of the shoots above, for the purpose of sending out a *new set of braces* above the *new raised hill*. This takes time, and frequently before the new roots have taken hold in the earth, a gust of wind and rain comes on; the consequence of which is, that the hill soon becomes softened by the rain, and the wind at the same time pressing the stalk against it, it gives

way and leaves an opening behind the stalk; this opening is instantly filled by the rain beating the earth into it, and the stalk secured as far as it has gone; another blast forces it still lower, and the same effect succeeds behind it; when the storm is over, we find the stalk fixed precisely at that point of depression, at which the hardest blast of wind left it, after the hill became wet. This is the present *improved* mode of hilling corn.

Let them reflect on the present mode of *supporting* their *stock*, which is principally from the *corn-house*; by neglecting the culture of *grasses*, the stock is maintained (if well maintained) at more than *double* the *expense* that it might be by a proper attention to grass; and the land at the same time reduced to *poverty*, that would otherwise be *enriched* by such attention.

Now my friends, view yourselves impartially in the mirror thus held up to you, and I believe you will cease to wonder, that you have not since discovered the advantages of *deep plowing*.

Hitherto I have treated of the beneficial effects to be derived from *deep tillage abstractedly*, and no further than abundant corroborating proofs will substantiate; but believing as I do, that if ever a material reformation takes place in *American agriculture*, that this will be the *basis*; I am induced to offer a few hints for consideration, respecting the probable advantages that may be derived from the practice, when combined with other necessary improvements; such as a due attention to manures, rotation of crops, &c. &c.

By a proper attention to these things may we not reasonably hope for the speedy fertilization of thousands of acres of exhausted old fields, that now will not pay for enclosing? To effect which I would propose, that the *system* by which they have been reduced to their present state of *poverty*, be in all points *reversed*. They have been reduced by *shallow ploughing*, an *ill-chosen* rotation of crops and a total neglect of *manure*. Let them be recruited by *deep plowing*, a *favorable rotation*, and *all the manure* which the best management

will afford them. My plan would be this; break up the ground in the fall, ploughing at least eight inches deep; if level, throw it into ridges, if hilly; begin at the base and surround the hill, if the situation will admit; if not, turn a furrow down the hill and let the plough return light; for if the furrows are attempted to be turned against the hill, it will not be effectually done, and the whole business will be thereby marred. In the spring, plough and harrow as often as convenient, or the state of the ground seems to require; always keeping to the same depth: If a sufficient quantity of manure is in readiness, the last ploughing should turn in from twenty-five to thirty large cart-loads per acre; then plant with potatoes; after they are dug in the fall, either sow down in wheat, and early in the spring red clover-seed; or let it lie over winter, and sow in the spring, barley or oats and clover.

If manure cannot be procured the first spring, let not the industrious improver be discouraged; but instead of potatoes, substitute some *shading crop*, that does not require so much strength of soil; such as peas, beans or buckwheat. I have no doubt that if the foregoing instructions are attended to, on the ground that has ever been tolerable, that one or other of these crops may be cultivated to profit: This will also better prepare the ground for the next year's operations, by which time it is presumed the cultivator will be furnished with manure to proceed as before mentioned. In planting potatoes on hilly ground, or any other crop set in rows, and requiring to be ploughed or hoed whilst growing, more attention should be paid to the rows being horizontal, than in straight lines, as being more favourable to derive advantage from hasty showers, and also to prevent washing. In most situations and soils it will be found that the clover will be much improved by the use of plaster of Paris, as a top dressing, and ought not to be neglected when it can be procured.

If by these means a good swarth of clover is produced, I consider the land as reclaimed; for I know of no better preparation for a crop of wheat, than a clover-lay well turned, after being mowed two years; the wheat sown on the ploughing and harrowed in.

Lands once reclaimed by these means, will by a familiar course of management, that is, by *deep cultivation*, a *well-chosen rotation*, and *manuring* as often as practicable, be kept in fine tith with much *less labour* than in the present mode. May we not then expect by a proper attention to these interesting considerations, great improvements in the cultivation of Indian corn, tobacco, potatoes, peas, beans, &c? We have found by experience, that these crops particularly, require the soil to be

kept open and clear of weeds during their growth; in order to effect these purposes, the common practice with respect to corn is, to plough and cross plough frequently, three or four inches deep, until about the time of tasseling or blossoming; in addition to which, many hill several times, and nearly all, once at least: The other crops are mostly ploughed, and almost universally hilled. But provided we can attain these ends (*viz.* the destruction of weeds, and an open soil) by other means, are those practices rational? Any one who will be at the pains to search, may easily discover, that the roots of corn soon extend themselves a considerable distance from the hill; by the time the time the top is knee high the roots are extended nearly from row to row (if not too frequently cut off by the plough) though so small as to be scarcely visible. Is there any good reason to suppose, that nature requires those numerous organs, prepared for the express purpose of supplying the rising plant with sufficient nourishment, to be so frequently mutilated, as must always happen in ploughing? thereby not only depriving the plant of that quantum of supply contained in the amputated vessels, but also of all future supplies by the same sources.

True it is, that above ground we frequently find it necessary, apparently to oppose operations of nature in some measure, in order to bring her to act more consistently with our views. For instance, fruit trees, and many kinds of plants that bear fruit upwards, often project so many branches and suckers, that notwithstanding the fruit may be thereby increased in number, yet we find it necessary to lop off a part, in order that the whole of the nutriment may be applied to the remainder; improving the quality and, frequently increasing the quantity thereby. But, that it is necessary to diminish the roots that supply the nutriment, I believe has never been proved by any experiment.

Yet nevertheless, we constantly see the good effects of frequent ploughing; the reason is obvious; in the common mode the ground becomes too solid in a few weeks, sometimes in a few days, for the roots to penetrate, and therefore it is better for the plant, when all its vessels of supply are embargoed, to part with one half, if thereby admittance is obtained for the other half to act freely. So that it may be fairly said, in the culture of Indian corn, of *two evils*, we choose the *least*. The important question is, how shall we avoid *both*? May I not answer, by attending to the foregoing instructions?

A suitable rotation, and the necessary preparation of the ground before planting, will so far clear it of weeds, that one or two ploughings and

as many harrowings afterwards, will complete that business; all which may be done by the middle of the sixth month, without material injury to the roots, as the corn at that time is seldom more than a foot in height. If these ploughings are of the depth before mentioned, there will not be the least danger of the soil becoming compact for a few weeks, until the growth is so much increased, as almost completely to shade it; after which it will need no ploughing to keep it open. This effect will generally take place in this state about the middle of the seventh month; for it is to be remembered that in this mode, it may be planted much closer than in the common way; the number of plants not being estimated so much from the surface as from the quantum of soil employed, as before hinted; for instance, if one plant requires a yard square of soil, of three and a half inches depth, the same surface will be more certain to bring to perfection two plants, when worked seven inches deep; experience having proved, that in some particular rich deep soils, corn will admit of being planted four times closer than is usual, without suffering from a want of air. Thus it is probable, nay experience has already reduced it to a certainty, that *half the ploughings* usually given to corn, may be made to produce *double the quantity on the same ground*: What an immense saving of land!

Much of what has been said with respect to corn will apply to the other crops; but as they are generally *hilled*, I am willing to express a sentiment on that *that practice* in general.

It has been long a matter of doubt with me, whether any kind of crop we cultivate requires this mode of tillage, except it be on low grounds, merely to avoid too much wet; and the greater opportunity I have had of making observations, to ascertain the fact, the more I have been confirmed in the sentiment. I believe it will always be found that nature disposes plants to make the best of their situation; to project their roots at such distances from the surface, and in such directions as are best calculated to extract their food from the surrounding soil: is it not then reasonable to suppose, that in removing the earth from the *extremities of the roots*, and heaping it about the *body of the plant*, we more or less *derange* the economy of *nature*? and instead of aiding we involve her in difficulties not to be surmounted, but at the expense of a part of her *vital secretions*.

I have examined the vines and roots of potatoes that have been much hilled, which plainly showed, that no *less than* three different sets of roots had been projected at as many differen

times, designed by nature to bear the fruit; the first and second having bulbs as large as peas or gooseberries; the third and nearest the surface bearing the burden of the fruit: these last springing from a part of the vine that must have been *above the surface* before the *first hilling*.

For notwithstanding the fibrous roots extend as deep as the fine open soil, the potatoes incline to lie about four or five inches from the surface. The shape of the hills or ridges, are also unfavourable to the retention of moisture. I have frequently seen potatoes dug that have been manured in the roots and several times hilled, which appeared to have derived very little advantage from the manure, which has been turned out dry, and nearly in the same crude state in which it was applied, not having received moisture sufficient for the purpose of fermentation. The best potatoes I ever had, were produced with scarce any hilling, the ground being kept open by other means, the same thing I have known to happen in the practice of others.

Having mentioned that within certain limits, exhausted lands may be reclaimed at half the expense that new lands are cleared, and also the quantity of manure that I apprehend necessary for the purpose, it may perhaps be expected, that I should say by what means such a quantity is to be collected, and also point out the favorable rotations before alluded to.

With respect to these much might be said, in addition to any thing I have seen published, especially on the subject of manures; but as they have already engaged the attention of many of our citizens, and as my present views are not to enlarge on subjects treated by others, but briefly to suggest a few things which appear to have escaped notice, or at least that attention I have believed their importance required; I shall say little on these subjects; but recommend enquiries to some small tracts written in our own country (to wit) G. Logan on rotation of crops—J. B. Boardley on the same—and Richard Peters on Gypsum.

But as it may not be practicable for all to be furnished with these authors, I will endeavor to sketch the outlines of what I think good management in these respects.

In the first place, house as many of the stock as possible throughout the winter, always keeping them well littered. Cattle that are not housed should have all their food given them in the barnyard, which should be so constructed as to prevent any wash passing away from it; an excavation should be made in some part of it, and always well supplied with mulch of some kind; such as refuse straw, weeds, corn-stalks, rich earth or

leaves from the woods, or several of them together. in order to imbibe the soaking of the manure thrown out of the stables, and also that which lies on the higher parts of the yard. All kinds of refuse substances capable of being converted into manure, ought to be thrown into the yard: The manure should be carted out in the fourth month and the yard again littered. If a considerable part of the materials remain unrotted when taken into the field it is not to be regretted, Only let the quantity be the greater, and have it immediately ploughed in; for I am clearly of opinion, that the putrefying fermentation, can no where be carried to so much profit as in the soil.

My management for two years past has been very indifferent, yet I have been enabled to manure one acre for every three head of grown horses and cattle, kept over winter, and nearly one from the hog-pen. The land it was applied to, with common cultivation without manure, would not have produced a barrel (five bushels) of corn to the acre; with the manure and tolerable cultivation, it produced six barrels. If it had been applied to land already in tolerable heart, I believe the proportional increase would have been much greater. This year my management has been better, but far from perfect, yet I expect to manure nearly an acre for every two head, at least I am certain the thing is practicable.

The principles upon which good rotations are founded, are these: That the naked soil be as little as possible exposed to the heat of summer; that ameliorating crops, so intervene exhausting ones, as to prevent a speedy reduction of the soil, and that the next that is to succeed it without much labour. Thus, for instance, a crop of beans or potatoes, prepares the ground for wheat, to be sown as soon as they are taken off: Indian corn or potatoes prepares for spring-barley and clover; and clover prepares for wheat: Buckwheat may be sown on wheat stubble, which leaves the ground for corn with manure the succeeding spring. These may be varied as best suits the soil, situation, or market, always keeping the first principles in view.

On soils inclining to stiffness, pasturing ought to be avoided as much as possible, and cutting and feeding green, substituted. The injury by treading on such soils, particularly when wet, is more than many are aware of. I have run a fence across a field set in clover, one field of which was afterwards mowed two years, two crops each year; the other was pastured the same length of time, principally by beef cattle, which continued in the field day and night, and consequently deposited their dung there; these divisions were both sown

down in wheat, in the tenth month; the part that was mowed, with one ploughing about seven inches deep, and harrowed in: It was observable in the latter part of summer, that the part pastured, was become too compact to be reduced by one ploughing and harrowing; it was therefore broken up in the eighth month; afterwards harrowed, then ploughed again about the same time with the other, sowed and harrowed in; and ploughing likewise about seven inches. At harvest, both sides of the fence were good, but the part that was mowed, much the best, I believe about five or six bushels per acre.

Thus, all my experiments and observations have uniformly tended to establish one fact, which is, that in order to insure success for a length of time, it is necessary that the soil be kept in fine tilth, and that to a considerable depth. In some parts of our rich Western country, nature seems to have effected this purpose, in great measure, without the labour of man: The earth being here covered with a fine black mould, to a greater depth than the deepest ploughing. As long as it continues in this state, the operation of the plough and harrow, will be of little other use, than burying the seed and destroying weeds. There are also two other kinds of soil, frequently to be met with in the Atlantic states, which are often preserved for a great length of time in a state favorable to vegetation, without much attention; these are, the fine black sandy soil, and the soil that abounds with calcareous earth, or lime-stone lands. Yet even on these, I believe we should find our account in a *deeper cultivation* than is usual. But by far the greater part of our country, is of the kind alluded to, in the foregoing remarks,

[TO BE CONTINUED]

The Resources of the United States for Sheep Husbandry and the Wool Manufacture.

THE ADDRESS OF HON. JOHN L. HAYES.

[Continued from Page 5, Vol. XVI., Md. Far.]

"I have still another reason for my reference to the English pastoral. I owe to it directly the line of thought which I shall endeavor to follow in this discourse. Its dominant sentiments is exultation in the possession by Britain of a commodity which has enriched every nation possessing it. Inspired by this idea, I obey the patriotic instinct due to my British descent, and select for my topic the "Resources of the United States for Sheep Husbandry and the Wool Manufacture."

I do not for a moment doubt the appropriateness of this theme for a national congress of farmers. There is no department of agriculture so cosmopolitan and unsectional as wool production and its incidents. Unlike the production of any other textile, or even of the cereals, it can be pursued with advantage in one or other of its forms in every State, and almost every country, in our national territory. England and New Jersey show its fitness for the oldest-settled countries and the contiguity of cities; Australia, California, and Colorado, that it is the pioneer industry for new States. Russia, Shetland, and the sea-girt islands of Maine show its resistance to the rigors of cold. The most southerly country in the Union, Nueces and Starr Counties in Texas, with their 700,000 sheep, show that it endures the heat of the semitropics, although the genial influences of more temperate latitudes may be specially manifest in the fleeces of Ohio and the Panhandle of Virginia. There is no soil so arid that it will not respond to the marvellous fertilizer which the sheep affords in its manure, and none so permanently rich that in time it may not need this best of all restoratives. Though on a large scale, and as an exclusive pursuit, fitted better for cheap lands and purely pastoral regions, it may be a most profitable adjunct to our most important husbandry,—the wheat culture; while there is no cotton plantation, dairy farm, or tobacco farm (as I shall hereafter show) where it may not be a valuable subsidiary, or usefully fill some gap. Incidental to wool-growing is the production of mutton; through which, above all other means, the cost of animal food, the heaviest item of necessary expense in every household, is kept within reasonable limits. Incidental, again, to wool production is its manufacture; the woollen mill invariably appearing where flocks are abundant and power at command. Thus the farmer has a market for his fleeces at his own door. Exchanging wool for cloth, without intermediary expenses, he finds the second great item of household expenditures—that of clothing—lessened by his sheep. This is not all: the woollen-mill is the first harbinger of a developed industry in an agricultural country. Other manufactures follow; a market is opened for crops which will not bear transportation. With a developed husbandry, lands increase in value; and, although the mills may pay no dividends, the prudent farmer is sure to thrive. This is no fancy sketch. When a boy, I saw the foundation laid of the first woollen-mill on the Salmon Falls River, within a mile of my father's flock of three hundred merino sheep. This river now moves one hundred and thirty-two thousand cotton spindles and fourteen sets of woollen machin-

ery. The mills, it is said, have not averaged three per cent. annual dividends since their first establishment. But the valley in which they lie has become a paradise of prosperous farmers.

To fully comprehend the blessings we enjoy in our present opulence in sheep and wool, we must consider our resources at the commencement of the centennial epoch. It is difficult to conceive the poverty in woollens of the masses of the American people a hundred years ago. The soldiers of our Revolution were chiefly clothed in linen. Wool in Philadelphia, at the commencement of the War of the Revolution, cost seven shillings a pound. Although New England was best supplied with wool, Mr. Otis said, during the war that there was not enough wool to furnish each inhabitant with a pair of stockings. The Assembly of Pennsylvania, by a resolution, recommended the people to abstain from eating, and the butchers from killing sheep. And the rich people of Philadelphia (the most opulent city in America) were urged to adopt the fashion of wearing leather doublets. Even the officers of our army were so ragged that, when guests at Baron Steuben's table, they were called by him, in friendly banter, his merry *sans culottes*. In our last war, we clothed mainly from our own flocks, 2,655,576 soldiers (the precise number) as no army was ever clothed before; and, at the close of the war, had a surplus in overcoats alone nearly sufficient to furnish an overcoat to one-third of all the voters in the United States.

It is related that General Lafayette, during the War of the Revolution, was invited by the ladies of Baltimore to a ball. He attended; but, instead of dancing, made this address to his fair hosts: "You are very handsome, you dance very prettily, your ball is very fine, *but my soldiers have no shirts*." Of course the appeal of the gallant young Frenchman was effectual in procuring a liberal supply. During our late war, of shirts in their orthodox meaning,—under-garments of cotton or linen,—it might be said, in Falstaff's words: "There's but a shirt and a half in all the company." But the abundance of wool caused the substitution of wool for cotton underclothing, and procured the supply by the government of woollen shirts and drawers, blouses and stockings, to which the excellent hygienic condition of our armies has been largely attributed. Mr. Hazard, a veteran wool manufacturer of Rhode Island, informs me, that he remembers that before and up to 1800, when he commenced the first manufacture of linsey-woolseys, the half-grown girls in the country districts of the Providence plantations were commonly

nearly as naked as savages, and invariably hid themselves at the approach of a traveller. Now a single mill in New England, making exclusively women's dress-stuffs, consumes for this purpose, every week, the fleeces of ten thousand sheep.

The number of sheep in the United States on the first day of January, 1878, as estimated by the eminent statistician of the Department of Agriculture, Mr. J. K. Dodge (than whom there is no higher authority), was a total of 35,740,500.

[The lecturer here illustrated tables of number of sheep in each State, by large charts. We omit these itemized statistics for want of room. The learned speaker than showed by figures, the increased number of sheep in the new States and Territories, and the decrease in the New England States, of late years, which decrease he attributes to a change to dairy farming, for supplying milk to the large cities. He then goes on to prove by reliable data, that—]

"The progress in sheep husbandry is not shown merely by the increase in number, but by the increase of wool production; for careful culture, and the introduction of different races, have increased the quality of wool in a greater ratio than is shown by the increased number of sheep."

* * * * *

"In 1877, there was a production in the Old States of 117,000,000 pounds; and in the Pacific States and Territories, of 208,000,000 pounds. Thus, with less than half the number of sheep in the old States, the wool production in the whole country is five times as great as in 1836."

He produced a carefully prepared chart to show that the number of sheep in the world, exclusive of the United States, was 484,000,000.

He then speaks of—

THE CHARACTERISTICS OF AMERICAN SHEEP HUSBANDRY.

The number of sheep grown in a country convey a very inadequate idea of the nation's resources. The character of the animal is of the first consideration. The sheep of the United States consist, first, of what are called the native sheep, which are descendants of the unimproved coarse-woolled English sheep first introduced (apparently of the old Leicester race), before Bakewell's improvements. Their product of wool in the extreme Southern States, where the old race is most characteristic, is about two pounds to the animal. The mutton, though not fat, is considered excellent. Second, descendants from the improved English races, principally brought from Canada. Third, the Mexican sheep found in Texas, New Mexico, Colorado, and California; a hardy, though a coarse and sparsely-woolled sheep, descended

from the Chourro race in Spain,—that country not permitting the fine-woolled sheep to be exported, even to her colonies. Fourth, the merino sheep, and crosses of that breed with three other named races.

The merinos constitute the principal and characteristic race in the United States. This is the most important fact in the enumeration of our resources for sheep husbandry and the wool manufacture. England has no merinos, except in her colonies; Russia, with sixty-five million sheep, has but twelve million merinos; France, but nine millions. Although the numbers in this country cannot be exactly given, the merinos and grades in the United States probably exceed twenty-five million; Merino wool is for clothing what wheat is for food: it is the chief material for cloth at the present day, entering into the coarsest as well as the finest. While the softest, it is the strongest, of all wool fibres, from the number of filaments which may be spun in a yarn of a given diameter. From its filling and spinning qualities, or what is sometimes called its carrying power, it is the best adhesive for the cheaper fabrics,—coarser wool, cotton, or shoddy; the mixture of merino wool increasing indefinitely the materials for cheap clothing. Abundant merino wool is the greatest boon the world has received from the animal kingdom in the last century. It is literally, in its extended culture, the product of the last century. A hundred years ago, all the merinos in the world, confined exclusively to Spain, did not, it is believed, number a million. 1765 marks the epoch of the first exportation of the merinos to Saxony; 1786, to France; 1803, to Australia; 1802, the introduction of the first merino sheep, whose descendants are known to have survived, to this country. The fact should be specially commemorated here, that to a Connecticut citizen, General Humphreys, and to the introduction to his farm, contiguous to this very city, of twenty-one rams and seventy ewes of the merino race, may be directly traced the most celebrated breeds of the American merino, and those through which our flocks have been chiefly ameliorated; producing individuals actually sold for \$5,000 each; others for from \$2,000 to \$3,000, and one for which \$10,000 was refused. The years 1809 and 1810 were the periods of the introduction of 3,850 merino sheep by Consul Jarvis, of Vermont, and about 2,500 by others, but all from the prime flocks of Spain; these flocks having been confiscated by the Spanish government, because the grantees, to whom they belonged, had joined the French. The sheep above mentioned formed the source of all the merino sheep in the country, with the exception of the very few sheep of the

Saxon blood now remaining, whose parents were introduced from Germany in four years, commencing in 1824, about 3,000 having been imported in that period. It is worthy of especial notice that our merinos were directly derived from the best flocks of Spain, before their decline; and that the new characters, improved upon the original Spanish race, are all of our own creation.

I would like to dwell at length upon that greatest marvel in the history of our domestic animals,—the isolated existence in Spain, for centuries, of this race of the merino. That it was a creation of man, I cannot doubt; but when and how will always remain a mystery. To those who wish to study this question, I would recommend the perusal of an admirable essay on the origin of the merino sheep, written by George William Bond, and published in the seventh volume of the "Bulletin of the National Association of Wool Manufacturers." I cannot refrain from adverting to a single point brought out by Mr. Bond's essay. The name "merino" is supposed by some writers to indicate that this race was imported from beyond the sea. Others declare it to mean "wandering," being identical with transhumantes; the sheep being moved from one section to another, according to the season. Doctor E. Oldendorff, in a learned communication, which will be published in our Bulletin, repudiates both these suppositions, and derives the name of the sheep from officers known under the ancient Spanish law, as *Merinos Majores* and *Merinos Minores*, the duty of the former being to distribute the pasture-lands to the transhumantes sheep; and the flocks were called merinos after the officers who had care of them.

The fibre of the merino sheep is not the only excellence of the animal. When properly bred, this race has a hardness of (as the French call it) *rusticity* surpassing all other high-bred races. The yolk or soap (fat and potash being its chief constituents) which nature provides to assist the growth of the wool, abounding in this race more than any, causes the tips of fleece to be cemented, and, with the assistance of the interior yolk, causes the fleeces to be impenetrable to the rain and snows. A lighter pasture suffices for their sustenance than would support the mutton races. Unlike the mutton sheep, the merinos *herd* admirably well; that is, keep while travelling or moving from pasture, in compact flocks, easily tended by the shepherd or his dog. They will thrive well in flocks of from 1,000 to 1,500 head. The wool, in this race, being of more importance than the mutton, and being more easily transported than any other agricultural commodity, distance from a market is but a little impediment to their culture. This race is

therefore fitted, above all others, for remote pastoral lands, and for culture on a large scale. Another quality of the merino race is of peculiar value in certain districts. This is, the power which it possesses of imparting its qualities to inferior races, the male animals possessing what is called *prepotency*,—a characteristic of long-established races. The merino gives scope to the breeder's highest art; which is, in the words of Polixenes, in Shakespeare's charming pastoral, the "Winter's Tale," to

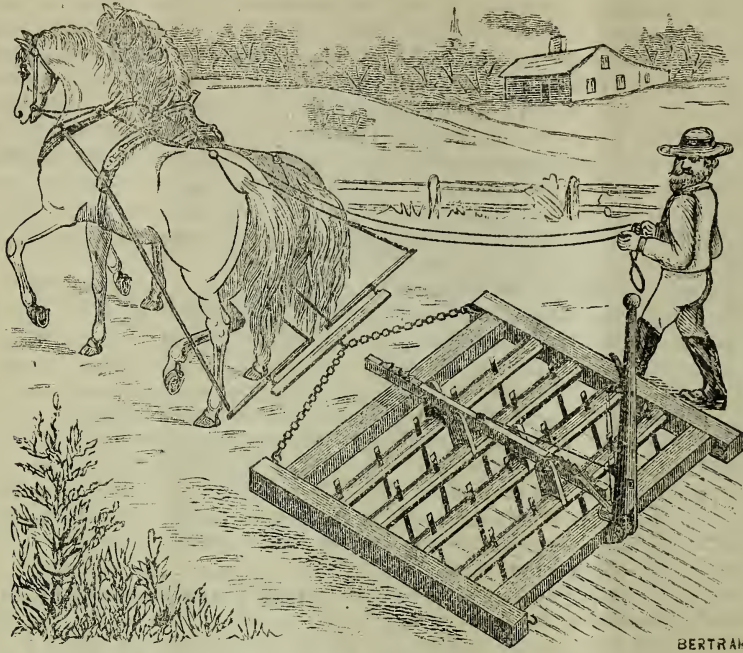
"Mary

A gentle scion to the wildest stock,
And make conceive a bark of baser kind
By bud of nobler race."

A continuous use of merino bucks builds up, upon a stock of inferior ewes, a flock of fine and densely-woolled animals, with marvellous rapidity. A Mexican ewe shearing one pound of coarse wool, if bred to a pure merino buck, will produce a lamb which, when one year old, will shear at least three pounds of much finer wool; and the produce of this lamb, if a ewe and bred to merino, will go up to four and a half or five pounds of still finer wool."

FARM WORK FOR FEBRUARY.

As this is not a very busy season of the year with the farmers, though it may be so with planters, we embrace the opportunity, to discuss farm implements, and suggest such as we feel sure are of the highest importance for the saving of labor and promotion of economy on the farm. To America is undoubtedly due the credit of having first invented and successfully applied, labor-saving machinery to agricultural purposes. Unlike other countries, these implements upon their introduction, were not opposed by the laboring classes, because of the greater enlightenment of those classes, who saw that such inventions as the reaper thrasher, the sewing machines and such like, were as grateful to themselves as they were helpful to the prosperity of their employers, and that they were equally benefited by these emanations of mechanical genius. No war was made against these wonderful machines and inventive genius went on to make improvements in the small as well as great articles of agricultural machinery and implements adapted to the better cultivation of the earth, lessening hand-work and calculated to promote the welfare of agriculturists, horticulturists and all others in any way engaged in terra-culture. In connection with this subject we quote from that admirable series: "Illustrated Annual Register," by J. J. Thomas, for 1879, when speaking of the improvements and inventions of agricultural implements in this country within the past twenty-five years:



BERTRAM

"We have not the data to furnish an estimate of the number of these machines in use, or of the amount of manual labor which they save. but if farmers generally could be thrown back for a moment on the use of wooden mould-board plows for inverting their soil, or the hand planting of seed, the scythe and cradle for cutting crops, the hand-flail for threshing grain, and on the other slow operations of former years, the impression would become vivid that a great revolution had been effected in the saving of hard work on the farm. But the saving of labor merely is by no means the whole benefit that results from these facilities. The farmer is enabled to perform his work so much more rapidly that heavy losses are often prevented. The mower and reaper enable him to cut his crops promptly in their right season; the hay tedder dries his hay, and the horse-rake, hay loader and horse-fork may save it in the best condition in the face of advancing storms. The ready preparation of his grain for market may enable him to take advantage of prices, or to place his crops in the purchaser's hands at the best or most convenient season of the year."

Among other indispensable farm implements, we would call your attention to the newly improved harrow, patented in June, 1877, by J. W. Carpenter, Bridgewater, Va. We think it a great improvement upon the Thomas Smoothing Harrows, of which we have often spoken in high praise, and still think that it is one of the most valuable implements ever invented for labor-saving, and doing fine work of a certain character. This Carpenter Harrow seems to be able to perform all the Thomas Harrow can do, and being

adjustable, is able to do much that our heretofore favorite harrow cannot do, except by repeated operations. We give a cut of it and refer to advertisement of it in this number of the FARMER. We have seen it and examined it, and fully approve of it as the most complete harrow we have ever seen. This is what is claimed for it, and a glance at the illustration will confirm the probability of the truth of all that is said of it, by its inventor.

"It is not only a perfect cutting harrow, but is equally as perfect a smoother. It is adapted to three other changes which are of great advantage. All who have ever used harrow or drag are well aware of the vexation of using a rigid perpendicular tooth that is commonly used in crossing sod land for corn, they bring a great many sods to the surface, and in cloddy ground, clods to the top of the ground. This improvement completely cures these troubles, as the teeth can be changed from one angle to another as rapidly as a hat is hung on a nail, and cannot escape therefrom by accident. It can be used for harrowing grain in the Spring to great advantage. If the land has become hard by heavy rains or otherwise, this harrow can be adjusted so that it will enter the soil better than the common harrow without adding any weight. It is so constructed that the team may be hitched to either end that both sides of the teeth may be used, therefore causing the wear to keep the teeth sharp. It can be used to great advantage on rough or rocky land, as it can be adjusted to pass over without hanging. It is simple in construction, and is not liable to get out of order."

Another very important machine, which should be in the possession of every farmer who owns a

dozen head of cattle and horses, is the "Young America Corn and Cob Mill." At this time of the year, this machine is of the utmost value to those who desire to economise in money, time and labor. The advantages appertaining to this mill are numerous, and command the serious consideration of every stock owner. It will, we are sure, pay for itself in three month's feeding of 20 head of stock.

Of other new and old, well-tried machinery and improvements suited to the wants of, and which are almost indispensable to every well-managed farm, we shall speak, as the seasons advance, when their uses are required.

STOCK OF ALL KINDS.

During this unusually severe winter, it will behoove farmers to give extra attention to their stock of all kinds. Give them warm quarters, good beds, pure water, enough food, including grain, and use the brush, card, or currycomb freely, upon all. Even the hog, delights in a good currying, and the friction does him good. A good rubbing, brushing and cleaning of the hair of cattle and horses is equal to or better than a hearty meal. Keep all stock free from dirt and filth. Rub or wash off all mud from horses legs before going into the stable for the night. Keep the cattle dry, and free from the mire and muck of the barn-yard. To do this the yard should be always well littered, and thereby the manure pile will accumulate largely each day.

IN THE WOODS.

Secure fire-wood for the next year. Cut fence rails and posts, split them to the right size; and set them up on end to dry, so they will be seasoned and lighter to haul when wanted.

TABACCO.

Be diligent to embrace every good season for stripping and conditioning. Make timely arrangements for tobacco beds. Sow one or more beds this month if the ground should come in good working order. Use guano, at the rate of 300 to 400 pounds per acre, at the time of sewing, and cover with green brush quite thick. If you have plenty of brush, we like the old plan of a good burning. Lay the brush very heavy, and if not well dried brush, intersperse dry corn stalks, leaves, &c., with the brush to ensure a steady burn until all is reduced to ashes. If a good coat of ashes be left, use no other manure. Where there are unslacked ashes in plenty, it is wasteful to use guano as the ashes will neutralize the effect of the guano. We always would prefer to dig up a new bed before burning with brush. Take a good spot with proper exposure, shrub it off, rake clean, dig it up

with grubbing or hilling hoes, leave it in the rough—lay on a heavy coat of good dry and large brush; burn well and have a thick coat of ashes left; then, prepare the land as fine as for a hot bed, sow the seed, roll or tread, which is best, cover with leafy green brush, pine is best, and we should have no fear but that you would have a fine plant bed early next spring.

GARDEN WORK FOR FEBRUARY.

The work to be done in the garden itself is not much, but considerable may be done outside to facilitate operations in spring and summer work, when the gardener will be taxed to his utmost energies. Poles for beans, trellises &c., can be provided. Brush for peas, can be procured, cut different lengths for the varied heights of this delicious vegetable, and tied in bundles after proper trimming and sharpening the ends. Birch and beech twigs or limbs are the best for these purposes. Pine brush for protecting earlier sorts of vegetables against frost and too much sunshine, ought to be got and put in a convenient place for use when wanted to be used as cover of night's when a cold snap comes in spring, or put on some days when the sun shines at that season with its summer heat, until the newly set out salads or other plants become acclimated to the sudden weather changes of the variable spring weather.

Cold Frames.—Plenty of air every day the temperature admits the raising of the sashes—as often as the plants seem to need it, water, with tepid water.

Lettuce. Force as much as you may require during the month. Nothing is more desirable than lettuce at this time of the year.

Radish.—Sow radish seed in a hot bed and give plenty of heat and moisture.

Peas.—As soon as the state of the ground admits working, sow some rows of peas—Tom Thumb or Carter's Early or the Alpha. Bury them 4 inches deep in well prepared good soil, not over-rich.

Beet, Parsnip and Onion Seeds.—May now be sown in sufficient quantity for early use.

Potatoes.—Should be planted as early as possible—the Early Rose is the best, plant 4 inches deep in drills, 3 feet apart and 10 inches apart in the drill. We would advise for early planting small well ripened whole potatoes, or large one, cut in half. Sprinkle with plaster and ashes, and cover over with well rotted manure, then the earth and over the whole a thick coat of coarse stable-manure, to be raked off when the vines appear above ground ready to receive their first hoeing.

Small Salading and Culinary Herbs Parsley in particular.—May now be sown and covered with leafy brush, such as pine or cedar. The beds should be in a dry warm situation.

Small Fruits.—Prune, dig about and manure or mulch with strawy manure these, such as the berries and dwarf-bushes of larger fruits.

Grapes.—Prune the grapes, make clean cuts with a sharp knife, and do not be afraid, but prune severely. Get approved books on grape culture, study them and follow the rules and advice given therein. If you have not an abundance of fine sorts of early and late grapes let us beg you to procure them at once, for there is no healthier, refreshing and delicious fruit that grows, which lasts so long as the grape. With a little care you can enjoy them from July to March.

From Carolina to Florida, gardening in general begins this month and our Southern friends should aim to have forward vegetables and fruits, both as a matter of house-hold economy and as a source of wholesome luxury. What they may not need at home, it will well repay them to send the over-plus north, where they bring high prices, and they have now great facilities to send what they can spare of fruits and vegetables. March, April and May, our Southern horticulturists have undisputed command of the markets of Baltimore, Philadelphia, New York and Boston for their peas, cucumbers, potatoes, corn, beans, &c., and for all the earlier fruits. Let us urge them to embrace these advantages.

Trucking seems a small business to our Southern friends compared with the great ante-bellum crops they poured into the lap of the world's commerce; but as things are, we are forced to the conclusion that there is more money in a few acres in the South, well cultivated and judiciously managed with skillful catering to the Northern markets, than there was in cotton and tobacco, after all expenses even in the past days were paid.

The South has a vast wealth in early vegetables and fruits. Let it at once avail itself of this great boon nature has bestowed upon her.

PEACHES.—The peach crop of the present year, so far as concerns the region immediately tributary to New York, has been exceptionally excellent in quality, but not equal in quantity to last year. The figures of this season's production are not yet accessible. In 1877 there passed over the Delaware R. R. over two million baskets, or 4,248 car loads, and it is estimated that an equal quantity reached a market by water. It must be borne in mind that these figures relate only to the eastern shores of Maryland and Virginia, and the State of Delaware.—*Pen and Plover.*

Annual Convention of the Farmers of Montgomery County, Md.

The Annual Convention of the Farmers of Montgomery County, assembled in the Lyceum Building, at Sandy Spring, on January 13, 1879, Mr. Henry C. Hallowell in the chair.

The minutes of the last meeting were read and approved, after which the committee appointed at that time to inquire into the Washington County Turnpike System, reported that, by the Act of 1876, the County Commissioners of Washington County were authorized to subscribe \$400 per mile, toward the construction of turnpikes in the county, by duly incorporated companies. The committee was continued.

The subject of railroad crossings on the grade of the county roads next came up, and was the occasion of some pretty plain talk and sharp criticism. Several parties have had very narrow escapes at the various crossings of the Baltimore and Ohio Railroad, by reason of the company's removal of its flagmen at those points, and resolutions were passed, condemning the course of the company in this particular, and a committee appointed to take such steps as should be necessary to remove the danger.

Mr. James Stabler, who is a clerk in the Department of Agriculture, stated to the convention, that when he asked for leave of absence to attend this meeting, the Commissioner of Agriculture had asked him to make known to the convention his desire to establish the most intimate relations with the farmers of the country, and that his effort should be to so administer his department as to produce practical results of value to the agricultural interests of the nation. Heretofore, the distribution of seed had been largely in the hands of politicians,—hereafter, the distribution would be from the department directly to the farmers, with a view to the improvement of crops, rather than to the popularity of party-men.

Thereupon, Mr. Charles Abert, offered the following resolution, which was adopted:

Resolved, That the expressed determination of the Commissioner of Agriculture to establish the most intimate relations possible with the farmers of the country, and so far as practicable distribute directly to them such seeds, documents, &c., as he is authorized to disseminate, rather than allow their appropriation as rewards for party services, meets with our hearty approval, and that we are ready at all times to co-operate with every wisely directed effort of the Agricultural Department to develop the resources of the country, add to its

material wealth, and elevate the condition of the farming class by the diffusion of useful knowledge amongst us.

A subject of considerable interest to the farmers of this section is the inconvenience and loss to which they are subjected, on account of the want of accommodation in Washington for their hay wagons. In inclement weather, which often comes on after the farmer has started his team, the hay becomes wet and the city dealers take advantage of the fact to reduce the already starvation prices of that product still further. A committee was appointed to inquire into the matter, and feasibility of a joint stock company for the erection of suitable shelters in the city.

James S. Hallowell offered the following preamble and resolution:

WHEREAS, It is highly essential that the people be continually watchful as to how the money collected from them in the form of taxation is expended, lest those intrusted with it should lose sight of that strict economy so necessary to be observed at all times, and very especially now, when all branches of business are so depressed and prices of farm products are so low as scarcely to pay necessary expenses of producing them; therefore,

Resolved, 1st. That it is the decided opinion of this convention, that a public meeting of the citizens of the county should be called to meet at Rockville, at an early day, to take into consideration the whole matter of taxation, with the view of ascertaining what course should be pursued to lessen our taxes, if possible, and to suggest any modification of existing laws by which the expenses of the county could be diminished without being detrimental to our best interests.

Resolved, 2nd. That a committee of five shall now be appointed to confer with other citizens of the county on the subject, and, after due consideration, if it shall appear to be advisable that such a general meeting be held, shall be requested to do so through the county papers. Adopted, and Jas. S. Hallowell, E. J. Hall, Chas. Abert, J. H. Strain and Wm. H. Farquhar, appointed as the committee.

Reports from the various farmer's clubs of the vicinity were next read. "The Club" reported the average yields to be, of wheat, 18 bushels per acre; corn, 8½ bbl.; oats, 32 bushels per acre; hay, 748 tons or 1.3-5 tons per acre; potatoes, 68 bushels per acre; average weight of hogs, 190 lbs., whole weight, 29,000 lbs.

The Enterprise Club reported the average yields to be, of wheat, 18 bushels; corn, 6½ bbls.; oats, 27 bushels; hay, 1½ tons; potatoes, 108 bushels; average weight of hogs, 150 lbs., killed at 7 months old.

The Montgomery County Club reported as follows: Wheat, 16.1-5 bushels; corn, 7½ bbls; oats, 20 bushels; potatoes, 104¾ bushels; hay, 1½ tons.

The Dairymen's Association made the following report: No. of cows, 100; yield of butter, 30,000 lbs., or 300 lbs. yearly per cow, at 33½ cents per lb. Decided preference was expressed for the Jersey cattle as butter producers.

The first question for discussion, "What is the most economical farm fence?" elicited considerable talk and much difference of opinion.

Henry C. Hallowell estimated the cost of a worm fence, of pine poles, at \$190 per mile, and that it would last at the farthest, ten years. The same amount of post and rail fence would cost \$450, and there was one on his place that had been standing thirty-four years, but would require repairs in the spring. Was in favor of post and rail.

Chas. Abert knew of one pine pole fence that lasted eight years, and had put up one that did not last three years.

Dr. Thomas thought worm fences the cheapest when made of good material, and placed on stones. Took down one which he had good authority for saying, had been up for ninety years. There was one on his place that was put there fifty years ago, and is a good fence yet. On a farm of 120 acres, in six fields, post and rail fencing would cost \$1200, a worm fence about half that amount.

James Stabler thought wire fences were not as well thought of as they should be.

Geo. Stabler said, osage orange hedges cost about \$150 per mile, and the after attention costs about as much as brambling a worm fence.

Wm. J. Thomas favored worm fences of chestnut rails.

E. J. Hall purchased in 1840, land enclosed with a worm fence, then several years old, and it is still standing.

On the question, "Is a worm fence the cheapest?" the vote stood, yea, 33; nay, 14.

Second question: "At the present prices of cattle and farm products, does it pay to raise calves?" Yes.

Third question: "Has any Montgomery County land reached a condition in which its fertility can be profitably maintained without bought fertilizers, except lime?" No.

Fourth question: "Is there any new crop that can be profitably introduced into our system of farming, such as broom-corn, flax, &c.?" No.

The fifth question: "What is the best method of fattening cattle?" Called forth such varieties, and conflicting opinions that no decision could be reached.

To the sixth question: "How many horses are needed in cultivating a farm of 150 acres?" The answer was four.

The convention then, towards dusk, adjourned. The attendance was large and interested; the discussions intelligent, and the occasion altogether an enjoyable one.

THE DAIRY.

For the Maryland Farmer.

Cost of Cows' Milk.

To know the cost of milk, there must first be known the cost of the food for the cow. Hay and grass are the principal articles of food; and two acres of land should be sufficient to pasture a cow during the season. Estimating the value of this land at \$25 per acre, the interest and taxes would not amount to more than \$2 per acre—being \$4 for the two acres—and there should be added \$5 annually for fertilizer to restore the depletion of the soil, making \$10 for the two acres; this, with the amount for interest and taxes, \$4, makes \$14 for the season of pasturage. Under this treatment the pasture will constantly increase in value, and be amply sufficient, whereas, under the system now generally adopted, pastures decrease in value, finally running into moss, requiring so much land to pasture a cow that, with the effort and time to obtain their food, it keeps them barely in condition, and a small surplus only to go to milk, and the land is finally of no value as a pasture.

Mowing lands may be estimated at \$50 per acre, and with proper care and attention will yield two tons of hay per acre, which is sufficient to keep a cow during the winter; for interest and taxes say \$4, fertilizer \$5, cutting, curing and getting hay to barn \$3 per ton, making in all, \$15; for grain and bran, and it is an advantage to feed some, add \$10. Roots in winter are a very beneficial food and keep the system in better condition than on dry food alone, and they increase the supply of milk.

Sugar beet pulp or pomace is equally as good as the whole beet. The beet juice can be used for making vinegar, treated the same as cider now is, or by treating the juice the same as maple sap is, it will produce a good article of brown sugar. 1000 lbs. sugar beets will make 8 lbs. sugar and 30 lbs. molasses, only fit for distilling purposes or food for stock, and they are especially fond of it. As remuneration for time and care bestowed on the cow the manure will nearly if not quite compensate, and if she is warmly stabled in winter, having good ventilation, properly and regularly fed and watered, kept clean and treated kindly, she will be a poor cow, and should be sold for beef, that will not give full 3000 qts. milk per annum, which will be divided in proportion something as follows: First month, 430 qts.; 2nd, 430; 3rd, 355; 4th, 337; 5th, 312; 6th, 312; 7th, 150; 8th, 150; 9th, 150; 10th, 150; 11th, 112; 12th, 112; in all, 3000 qts. milk, 32½ ounces each, 6422 pounds.

The value of the calf may be estimated at five dollars, and if farmers would have only full blood stock, or high grades, and they can gradually work to this end, by only using *full blood bull*, the value of their stock would be enhanced and the quantity of milk increased by the improvement in the stock.

From the above we arrive at the following summary:

COW DEBIT.

Cost of pasture for cow,	\$14
Cost of hay for cow,	15
Cost of grain and shorts for cow,	10
	—
	\$39

COW CREDIT.

3000 qts. milk at cost, 1.134c.	}	
or		
6422 pounds milk, at 5.30c,	}	\$34
Calf,		5
		—
		\$39

Care and time equals value of manure.

It requires, to make one pound of cheese, about 10 pounds milk. At 0.53 cents a pound it is 5.30 cents. Add, for manufacturing, 2 cents a pound, which makes the cost of cheese 7.30 cents a pound. 25 lbs. milk, for *pound* butter (milk from Jersey cows does not require so much as this) at 0.53 is 13.25 cents. Add, for manufacturing, etc., 4 cents a pound, which makes the cost of the butter 17.35 cents per pound. The whey from the manufacture of cheese and the skimmed and buttermilk from the manufacture of butter have not been deducted, and would reduce the cost to the extent of their value; this is nominal on account of the limited demand. Skimmed milk is a valuable article but not duly appreciated. It could be used profitably to a much larger extent than it now is. Milk producers can put their milk into butter to good advantage, if they can utilize the skimmed and buttermilk, and this can be done by replacing the butter withdrawn with oleo-margarine, and converting it into cheese, and it will be fully equal to full milk cheese, and well manufactured cannot be distinguished from it. Oleo-margarine is now an article of commerce, and the dairy interest cannot shut their eyes to the fact, and have got to meet its competition; and no low grade or common butter can do so. It is only butter made from the best of milk and skillfully manufactured that is superior to it.

ANDREW H. WARD.

Bridgewater, July 6, 1868.

Mr. Miller, of Stockton, N. Y., has for six winters fed corn meal exclusively to his cows. He gives a bushel of meal in twelve days without hay.

TREAT THE COWS KINDLY.

Treat the cows you milk with the greatest kindness. Never bawl at, or kick or strike a cow. If cows are treated kindly, they will readily yield their milk. If abused, they will hold it up. Most cows are ruined when heifers. Some rough, passionate man undertakes to break them to milk. They are fearful they will be hurt, hold up their milk, kick, will not stand still, and the man who breaks them kicks and maltreats them, and they kick in return, and are perhaps permanently ruined as free, kind milkers.

Calves and heifers should be petted till they give milk. They should be taught that man is their friend—not enemy. They should be well fed because they can't give milk without eating the material to furnish it. If given warm stables and warm beds, their systems do not require so much food in winter to keep up the animal heat, and they will give more milk therefor. For family cows, heifers with their first calves should be milked till within a few weeks of their coming in again. Ever after, they will continue to give milk up to the same time. If dried off early, they will always dry up their milk early.—*Rural World*.

THE BEST MILKER.

The cow that is fleshy gives milk that is richer in butter than the cow that is poor and thin. One that has reached her full maturity gives better milk than she did before she reaches that age; a cow that is gaining flesh day by day gives richer milk than a cow that is losing gradually. The condition of the pastures has also much to do with the quality of the production.—*Scientific Farmer*.

Wholesome Advice—The Past and Present.

BELMONT STOCK FARM, NEAR CHARLOTTEVILLE, }
VA., January 12th, 1879. }

Messrs. Editors:

I have taken your paper since "the unpleasantness" abated in 1865, and the veil that hung sadly between us was removed enough to get it, and I had intended in cutting down my expenses to discontinue it with last vol., but your reduction in price, (and which I fear is too low), would not allow me to withdraw, and I renew for the year, and send you an advertisement, as an earnest of my interest in your welfare, and the good people of Maryland. I feel toward them as if there was no State line between us.

Your associate, poor Mills, I often met and always felt toward him as a Virginian, and kept an eye on his success and regretted his untimely death.

Your monthly reprint of the history of your Society and its transactions I like. From the first fair I attended in 1851, and many after, till the gap made by war, and again in 1866 and for several years after, as an Exhibitor of Import'd Percheron Norman Horses and always felt pleased to be there, *they were good times*, but each year has grown sadder in our agricultural prosperity, and consequently in everything else. I read your monthly parts of your Society's transactions, with very sad interest, nearly every one of the early workers have passed away, or the hand of age lies heavy upon them, and too often the loss of their early gains and their interest has waned, and we see but here and there names of the better days of the society members left. We are probably now at the bottom round of the ladder of our misfortunes, rather at its foot, and we may go forward and up again, and if we do, it will be slow, and when we have learned more industry, economy and self denial, avoiding idlers or people who cry over the past misfortunes, still hate our enemies and ask no favors, but "play quits" and start with a self-reliant air to win success again.

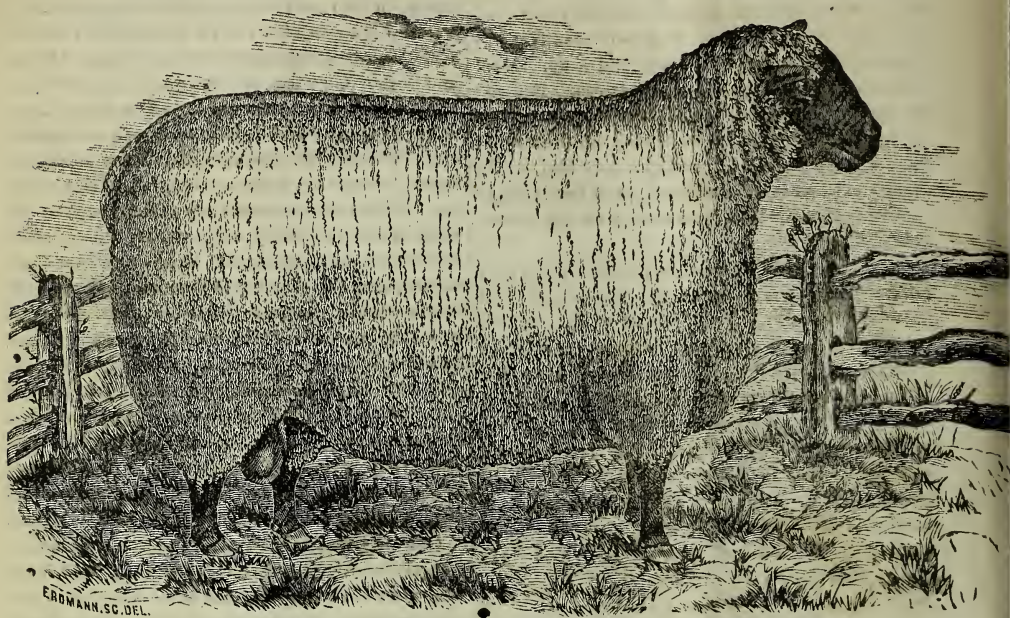
Our Virginia State Agricultural Society held its first fair at Richmond in October 1853, and each year after till war suspended it in 1861, and we resumed again in 1869 and grown in completeness each year since, and there are some dozen local fairs that are well sustained and they are doing much good throughout the state.

Our Society has decided to publish in monthly numbers of 48 pages of the past transactions with other matter, and thus to place in print our past, and it will be like yours, a sad history of our "better days of the republic," but we must build up again and no way does more good than to foster agriculture and labors incident to it, diversify our farm products and incline to grass and improved stock and only till the soil at prices of labor to leave a support and some profit for their capital. Our agricultural classes, with a few exceptions, are poorer than in '66, and have continued to grow worse to this hour. Appearances are better since the rubicon of resumption is probably being passed without harm, and if so we may take fresh hope, but we must lay aside early luxurious habits, and allow no idlers to live on our lands, pay only for their work what will pay the farmers and capitalists in their enterprises, and thus we should be a self-supporting and independent people.

To add to our State's troubles, there has been too much said of our State debt by those who are unwilling to pay the generally acknowledged estimated amount, and it is mainly opposed by those who are unable to pay their own debts and are demoralized and willing that the dishonor may become fashionable, and the State should follow their lead, but honor will prevail and Virginia in her worst poverty and misfortunes will legislate and bring no dishonor on her good name.

S. W. FICKLIN.

LIVE STOCK REGISTER.



Imported Southdown Ram "Lord Walsingham." SOUTHDOWNS.

We give above an illustration of the fine imported yearling ram, LORD WALSHINGHAM, winner of the Centennial Medal, and named after the celebrated breeder of the "Merton Flock," by whom he was bred. The Merton Flock, it will be remembered, took all the first-class premiums awarded to that breed, at the Paris Exposition last year.

The scrawny black-faced, hardy sheep of the chalky downs, of England, which were found there by William, the Conqueror, and remained pure as a class of sheep, down to about a century ago, when John Ellman undertook to improve the breed by careful selections and crossing. He succeeded admirably. Then followed the late Mr. Webb, who took up the improvement of this breed, which Mr. Ellman left as his *Southdown* Sheep.

The judicious and systematic course of Mr. Webb, was rewarded, by making them world-renowned as a mutton sheep, and by him they were brought to their present high standard of superiority.

We are indebted to Messrs. Benson, Maule & Co., Philadelphia, for the above cut, and we also give the following extract from their catalogue, concerning this superb breed of sheep.

"This breed, wherever introduced, has become deservedly popular and a general favorite. Southdown mutton is everywhere famous, and at all times commands the highest price; the wool also can always be sold at remunerative figures. By judicious crossing a number of superior breeds have sprung from the Southdown, among which may be mentioned the Oxford Downs, etc. They become rapidly acclimated to different degrees of soil and temperature, and from closeness of fleece are fitted to resist sudden changes, coming through a severe winter without injury, where numbers of other breeds have perished. Thus it may be seen that the Southdowns have many qualities that recommend them very highly to the agricultural community, viz: first their mutton has no equal; second, they are the best breed to cross on common sheep, a good ram making a wonderful improvement in any flock and enhancing the value of the offspring very materially; they are extremely hardy, though somewhat surpassed in this respect by the Cotswold.

In the Southdown we have large hams and shoulders, a prominent development of all the valued parts and an absence of horns, short necks. Thus all waste parts are small. They will dress more real flesh than common sheep. They can be brought into the market at any age from two to four years; at eight months old they will dress from sixty to one hundred pounds. They will reach a weight of one hundred and seventy-five to two hundred pounds at two years, and will fatten quite readily at any age. They will shear

eight or ten pounds of superior wool. Farmers who keep sheep for mutton and wool combined will find that the Southdown is by all odds the sheep that will pay the best. Southdowns have brown faces and legs; haunch well let down; small head; neck short and well set on; fore quarters broad and deep; back and loins broad and straight; chest broad and ribs well arched; the belly as straight as back and well defended with wool; limbs short in proportion to size of body; bone fine but strong; face and forehead covered with soft hair; wool short, thick, curled and soft, and coming well forward over the face and terminating in a tuft on the forehead; ears thin, and eyes bright. They are altogether neat and symmetrical in form. They are capable of subsisting on scant herbage successfully, and are very docile in disposition.

For the Maryland Farmer.

HORSE MANAGEMENT.

BY D. Z. EVANS, JR.

Nearly or quite nine-tenths of the bad tricks and vicious traits which many horses possess, have been directly caused by improper management when the horses were mere colts, when they were being broken to harness, or soon afterward. A horse is guided altogether by instinct and memory. If a person gradually and kindly overcomes a colt's natural fear of harness, the most of the trouble is over, the other part of the training being comparatively easy. A timid person, and one who does not have entire confidence in and control of himself should never attempt to handle a high bred and excitable colt, and all this should be backed by considerable experience. A nervous person is apt to communicate the undesirable trait to his horse, and a horse soon finds out that his driver has confidence neither in himself or the horse and acts accordingly. We believe in firm treatment of a horse, which does not mean, necessarily, unkindness or repeatedly thrashing the animal, though they occasionally may need the latter. Use considerable common sense and forbearance and you will not be sorry for it. In driving a young horse, do not force him, but let him go along easily, keeping him merely in his place in the road. Do not use the whip, but keep a firm, tho' not tight hold of the reins. If he happens to become frightened at anything in the road, speak to him reasonably and calm his fears. When you have driven him some little distance past the object, go back past it again, until the horse finds out that what so startled him at first is entirely harmless, and by all means never use the whip for such a thing as this, for a young horse is apt to ever after associate the idea of anything startling with a whipping, and may cause serious trouble. Do not rely altogeth-

er on the lines, but speak gently to your horse often, to give him confidence, and when he has behaved himself well, pat him and make a friend of him, for such kindness will not be lost. If more kindness and less harshness was used, we would see fewer vicious and unruly horses than we now do. Some few years ago a friend of ours had a very handsome, high bred trotting mare, and he could not use her on account of her unruly temper, as he said. We saw her, admired her and her splendid way of going, she being a fast trotter, and soon became her owner, the former owner being glad to part with her at any price. We took her to our place in Maryland, and soon after we got her there we took a drive to Middletown, Delaware, distance about ten miles. She was then the wildest thing we ever drove, starting off from home with three tremendous leaps, and keeping a slashing trot all the way there and all the way back, bouncing out of the shafts before she was entirely ungear. In six months time we had made an entirely different horse of her. She no longer lugged on the bit, and she forgot to jump when starting off and when she was being ungear. We did all this by kindness and gentleness, coupled with kindness and a knowledge of what we were doing. Many a time have we gone, as have younger members of the family, to the farthest corner of the pasture field and ridden her in without saddle or bridle. She will come at our call as far as she can hear us. She is still excitable and especially dislikes to be held in for other teams to pass her on the road. So much is she now to my liking, I would not part with her for many times what she cost me, and expect to keep her until she dies of old age.

AMERICAN CATTLE IN ENGLAND. — It appears that the trade in American live and dead stock imported to this country is rapidly on the increase. Almost every steamer arriving at Liverpool from Boston discharges large consignments of horses, cattle, sheep and pigs. In cattle the trade has increased to an amazing extent, the average weekly arrival at the Mersey from America being 2,000 head. Several of the American liners, which formerly carried passengers only, have had the whole available space fitted up for the live stock trade, giving up the former entirely. The supply of American cattle at the Liverpool markets has been greatly in excess of the home cattle, while several of the largest Irish dealers have purchased extensively, and had them conveyed to Dublin. Sailing vessels are also employed in the American live stock trade, and it is probable that the receipt of cattle may be increased to 5,000 head per week in a short time. — *London Farmer.*

For the Maryland Farmer.

The Smithfield Fat Cattle Show.

This great show deservedly holds an unequalled position for its objects in the world, and from three visits made there, in as many days, could not but compare its appreciation, by its tens of thousands of visitors, with the want of similar interest among our own people.

The cattle classes numbered 182 entries, in each of which I was surprised to find some quite common beasts, particularly among the Hereford, and Short Horn entries—The champion prize for best animal was deservedly taken by a beautiful roan heifer, 3 years and 10 months old, weighing 2,110 lbs., bred by Mr. Richard Stratton of Monmouthshire, she is evidently a Short Horn, by Protector, a Moss Rose bull, her dam's pedigree being as is termed too short to admit her registration in herd book. It is a mooted question, whether her perfectness, is to a great extent, owing to the *deficiency* of pedigree. Her awards were as follows—£25 best in her class—£40 silver cup, best Short Horn (the Smithfield club are not so particular, as Herd book committee)—£50 silver cup, as best cow, or heifer, on exhibition, and champion plate, of £100 as best beast—The next highest award was not so satisfactory, the prize was taken by Mr. James S. Bult, of Taunton, with a Short Horn steer, 3 years and 11 months old, with some marked deficiencies in his make up, being short, and heavily boned, the contestant (which was for best male, upon exhibition without regard to breed) was a four year old Hereford, exhibited by Mr. Robert Wortley, of Norfolk—the latter certainly was a finished beast, of immense length, and still more astonishing depth of carcass, outsprung heavily covered rib, full hanging flank, massive rounds, level thickly covered back, good fore quarter, and head of exceedingly fine Hereford character—the difference of opinion was not between Hereford and Short Horn breeds, while examining the Hereford with a friend on Monday, Dec. 9th Mr. A. M. Michell, of Alloax, a noted Short Horn breeder came up, declaring that the Hereford was the best steer upon exhibition, and further the Short Horn was also surpassed by the Devon. The London *Times*, in an apologetic strain, winds up a notice of the award, by referring to the fact of the difference in weight being in favor of the Short Horn, and saying "otherwise, in the opinion of some excellent critics, it is a question whether the Hereford should not have beaten the Short Horn." Passing over the other beasts, I was brought to a stand, at the Sussex Division—they are a uniformly red cattle, having all the characteristics of the

Devon's, with considerable more size. I am surprised that the breeds are not crossed.

The sheep class, if anything, were the special attraction of the show, the number of entries was 156. Leicester's, Cotswold's, Lincoln's, and Kentish or Romney Marsh represented the Long Wools, South Downs, Hampshire or Wiltshire Down's, Shropshire, Oxfordshire, and Cheviots—the mountain sheep, not Cheviots, were classed as white faced and speckled or black faced; there was also a distinct class of cross bred sheep, among which were some of the best specimens upon exhibition—the Hampshire or Wiltshire, seem to be chosen to cross upon the Long Wools. The most astonishing thing is the weight to which 9 and 10 months old lambs have been brought to, pen's of three weighing 560 lbs., pen's of Wether's, 21 to 22 months old weighing 890 lbs. We have been led to believe that Englishmen, only eat mutton at three year's old, and upwards, but all of the 156 entries were brought to the Smithfield show for sale—one Oxfordshire ewe, weighed 295 lbs.

Lord Cherham's pen of Shropshires took the champion prize, as best pen of sheep upon exhibition. Among the Hampshire's or Wiltshire's there were remarkable pen's, they are a wonderful long sheep, and capable of carrying great weight. Much skill is shown, by the shepherds in shearing the sheep, *partially*, thereby giving an evenness of shape, much admired by the casual visitors, but not so deceiving to judges, who are only satisfied, by handling, proving the old adage, "that's not all gold that glitters." There were 63 entries of pig's, (there are no hogs in England) divided into four classes, White, Black, Berkshire and other breeds—they were all good.

Portable steam engines, and all kinds of agricultural machinery and implements were to be seen, and a very large display of carriages.

Seedsmen, with large exhibition's of roots and other products from their seed's, were, only less persistent, in soliciting orders, than the manufacturer's of cattle food—this latter, is evidently a large business, with much competition. The hall in which the Smithfield club holds its show, is at Islington, approached from all parts of London, by Omnibuses, *Trams*, (or city horse car's) run also there, and a *Hansom* carries you three miles for 18 cents—This year, the owners of the hall have given the club £1,400, to hold the show there, and for space occupied by exhibitor's, the club has received about £2,000, this, with receipts from members would make the receipts of the club about \$17,000—The admission money is taken by the owners of the hall, and pays them handsomely,

There were many distinguished men pointed out to me, during the show, but none, whose history was more interesting than that of Sir Brandreth F. Gibbs, chiefly distinguished for his active identity with the Smithfield club, and Royal Agricultural Society, for the last 35 years. He has recently received the honor of knighthood, from the Queen, in recognition of his great services.—He is in fact the one man, who does the work at these shows, and as such, is appreciated.

very truly yours,

JOHN MERRYMAN.

London Dec. 19, 1878.

For the Maryland Farmer.

FERRETS.

Having received lately numerous inquiries how to keep ferrets, a few simple instructions through the columns of the MARYLAND FARMER may not come amiss. Make a box about six feet in length by two and a half feet broad and two feet deep. Partition one end, say two feet with solid wood, leaving a small entrance hole. The top and sides of this should all be made of wood, the top lifting on a hinge to facilitate cleaning. This nest, or bed room, should be supplied with hay or straw. The outer "run" of four feet in length, should have the bottom made of wire netting through which the droppings can fall. The top should also be of wire netting and on hinges. Cleanliness is the great secret of success in keeping or raising ferrets, as if these compartments are unclean they speedily get the "rot" and die. It is on account of their great mortality from this cause that they are so scarce and command such high, prices from \$15 to \$25 per pair. The best feed is bread and milk. They soon become quite tame, but nevertheless, care should always be taken on handling them by the back of the neck, as they will speedily grasp a hand thrust carelessly into their cage, and their teeth are such as to make a grip most undesirable. Their great value is in hunting rats, and for this purpose they are in large demand.

W. A. B.

FATTENING BEEF ANIMALS PAYS—But trying to fatten inferior animals is a waste of energy, time, and labor. The animals should be selected with special reference to the rapidity with which they will fatten; to the quality of the beef, fineness of bone, compactness of body, and small amount of offal which the carcass will yield.—*American Agriculturist*.

Our Cattle Trade with Europe.

The shipment of live cattle and fresh beef to Europe is a trade that is yearly gaining in value and importance. Shipping cattle on the hoof to Europe has been done in a small way for ten years, but last year the shipment began to be very large. The business has now become an important branch of our foreign trade, and from the first of September there have been an average of three thousand cattle a week shipped to Europe from Montreal, Boston, New York, Philadelphia and Baltimore. To show the enterprise displayed in the business, as well as the profit realized, the fact may be cited that a large lot of cattle were last fall driven from Oregon to Ogden, 1,500 miles, then sent by rail to Chicago, fed for six months at distilleries, shipped to Liverpool and sold there \$180 a head. The ordinary cost of shipping prime cattle from Chicago to Liverpool is \$17. It does not pay to send any but the very best, because the charges are levied per animal and not per hundred pounds.

In regard to the percentage of loss: a gentleman largely engaged in the business states that out of 26 boat loads shipped in the late spring and summer he only lost three head. In the last of August and first of September the cattle commenced to die.

The business of shipping fresh beef in quarters to Europe commenced about two and a half years ago. An average of a thousand cattle a week are so shipped, and the amount will increase during the winter months. It is estimated that the British market will take, live and dressed, about four thousand cattle a week from the United States. Former prejudices against American beef seem to have been overcome in England, and now our beef sells as well and sometimes better, in the English market, than their own.—*Exchange*.

ENGLISH PRIZE BEEF.—We were shown the 10th ulto., the most superb piece of beef we ever beheld. It was sent to Ex-Gov. Bowie, from his friend, Mr. Merryman, of Hayfields, now abroad. It was from the Angus, polled prize beef of the Smithfield England, Christmas Fat-cattle Show. The fat was from 4 to 7 inches thick, and what lean there was of it, was marbled with fat. The wonder is, how as much fat can be laid on the ribs of an animal. We should like much to learn the system of feeding which produced it. One striking peculiarity about it was the exceeding thinness and smallness of the bones. This was a rib piece, not the sirloin steak part where most fat accumulates. If our American beef in its general condition, is preferred in the English markets to English beef, what would it bring if fattened like this specimen was?

THE MARYLAND FARMER,

A STANDARD MAGAZINE.

DEVOTED TO

Agriculture, Horticulture & Rural Economy.

EZRA WHITMAN,

Editor.

COL. W. W. W. BOWIE, Associate Editor.

141 West Pratt Street

BALTIMORE.

BALTIMORE, FEBRUARY 1, 1879.

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These articles we warrant to be first-class.

THANKS.

We are glad to acknowledge that the change in our Terms, to suit the times, is receiving its reward. The dollar subscriptions for 1879 are coming in freely. Our old subscribers come up bravely so as to secure the benefit of the reduction in price of the "Maryland Farmer." Come on gentlemen and continue encouraging good work at low prices, these hard times.

TO ADVERTISERS

The large circulation of the Maryland Farmer makes it one of the best mediums for advertisers of all classes. Its circulation will be largely increased by our reduction in the Subscription Price, and hence add to its advantages as a medium for advertisers. The terms of advertising will remain as heretofore.

The Maryland Farmer will be read this year by more Farmers, Planters, Merchants, Mechanics and others interested in Agriculture, than any other magazine which circulates in the Middle or Southern States, and therefore is the best medium for advertisers who desire to extend their sales in this territory.

Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

We call attention to our Reduction in Price of Subscription.

YOUNG MEN!

It is an easy way to make money by getting subscribers for THE MARYLAND FARMER. Send to cents for Specimen Copies, and ascertain what Liberal Commissions we will allow.

THE NATIONAL AGRICULTURAL CONGRESS—Will hold its next meeting on the 25th of this month (February) at Nashville, Tennessee.

A large attendance is confidently expected and arrangements will be made with the different railroad companies for reduced rates of fare for the delegates. The Congress was fortunate in so desirable a locality at this season of the year for its meeting. Nashville was the place, of all others, that the late President—Hon. J. C. Flagg—preferred for this meeting, as expressed to us only a short time before his death last year. We hope and believe the Congress will be largely attended, and as full of interest as its national importance seems to demand.

We are grieved to announce the death of an estimable gentleman—Mr. Joseph N. Sturtevant, of Massachusetts. The *New England Farmer* of last week, says:

"Joseph N. Sturtevant, one of the well-known Sturtevant Brothers of Waushakum Farm in Framingham, died on Sunday of consumption. Mr. Sturtevant was connected with the *Scientific Farmer* of Boston, and had been a prominent writer, on topics interesting to the farmer, for the agricultural press in various parts of the country.

The essay of Mr. Thomas Moore will be read with pleasure, and is worth subscription for a whole year to the MARYLAND FARMER. It reads like prophesy. His views in the main, expressed 78 years ago, are now approved and practiced upon by enlightened agriculturists. Some, indeed a majority of our practical farmers will no doubt differ with him on the one alone subject of plowing in manure the better practice being held to be, at this day, using manure as a top-dressing for grass and grain crops. To this latter doctrine we are converts especially if the manure be not well rotted. But the great principles he lays down for the renovation of worn-out lands are now received as orthodox, and is surprising that the new ideas of that day, uttered by that far-seeing farmer should be like some seeds long buried, spring up after many years and bear fruit abundantly. The essay on Sheep Husbandry is full of interest and valuable information to sheep breeders. These two articles take up much space, but, if read carefully, we feel sure it will be admitted that they deserve the room they occupy in our over-burdened columns.

We shall always be pleased to receive reports of the doings of Farmer's Clubs, Granges and other associations whose purpose it may be to advance the interests of the farming community.

Our thanks are due to the young gentleman who has given us so admirable and succinct a report of the proceedings of the Farmer's Convention of Montgomery County, which we publish elsewhere in this number of the MARYLAND FARMER.

In a private letter from an esteemed friend who was a member of the Convention, after saying it was of a highly interesting character, makes the following statement—"The dairy business, amongst the young members of our county clubs, is the absorbing question and business, it being found, by far, the most profitable of our mixed modes of farming. Some cows are reported as yielding 14, 15, 16, 17 and 18½ lbs. of butter per week. Thus you see we are 'going ahead.'"

This is produced by the sons of farmers on lands owned by their ancestors, that when I came to the county not many years ago,—for you know I am young (?)—would not produce 3 barrels of corn per acre. Most of the Club Reports are from the owners of such land."

[This statement is very encouraging to all farmers, for the same persistent industry and "go a head" system pursued by the young men of Montgomery, could be equally beneficially pursued in other parts of our State and in the South. Foolish pride, idleness and luxurious habits must be abandoned by our young men, and industry, pride in their avocation, study of books and nature, be their hearts delight, if they desire to become intelligent, prosperous noblemen of the soil.]

SOUTHDOWN SHEEP FOR DRUID HILL PARK.—Our esteemed correspondent, Hon. Jno. Merryman, whose letters from Europe being published in the MARYLAND FARMER; and perused with so much pleasure by our readers, has purchased from Mr. Henry Webb, near Cambridge, England, two Southdown Bucks, for the use of the Druid Hill Park. Mayor Labrobe, on the part of the Park Commissioners, forwarded \$355 for the purchase and shipment of these bucks. In noticing this fact the Baltimore *Sun*, says:

"This flock comprises 125 sheep, and have been a source of income to the commission. About 100 bucks are bred each year, and bring from \$15 to \$20 each, having a very ready sale. In time the influence of the Druid Hill flock will be felt throughout the State. What is next wanted is a sheep protection law, and probably when all the farmers, large and small, get to have good and valuable sheep worthless dogs will be taxed."

The latter suggestion we heartily endorse.

HORTICULTURAL.



Kieffer's Hybrid Pear.

This new variety is unquestionably a great acquisition to the list of choice fruits. It is the best of two hundred seedlings, raised from the Chinese Sand Pear, crossed with a cultivated variety, supposed to be the Bartlett, which was growing near by the original Sand Pear tree, from which the seed was obtained in or about the year 1868. This seedling tree commenced fruiting in 1873, when about five years of age, and has yielded well every year since—several bushels have been gathered of a season. The Chinese Sand Pear, as is well known, is *absolutely blight proof*, remaining green and vigorous in situations where other varieties blight and die.

The Kieffer Hybrid, like its parent, resists the blight and all other diseases, and has the same healthy luxuriant foliage, making a strong growth under circumstances where ordinary varieties fail to grow. It is an early bearer commencing to produce fruit when three or four years of age, and enormously productive within a few years. The fruit is large, measuring from 10½ to 11 inches around, weighing from 10 to 12 ounces each, and very uniform in size. Double turbinate shape, pointed at each end; skin greenish yellow, some russet; stalk short and stout; flesh white, buttery and juicy; quality good. It ripens in October, when pears are scarce and high. It colors up beautifully, giving a rich yellow appearance. It does not rot until very ripe, and remains firm at the core to the last.

Possessing as it does, so many good qualities' this variety is destined to work a revolution in pear culture, and will occupy the same position among pears that the Concord does among grapes, and the Wilson's Albany has heretofore among strawberries. It is the pear for the million, and can be grown as easily, cheaply and abundantly as apples, and brought the past fall, 1878, in market, \$4.00 per bushel.

At the International Exhibition, held in Philadelphia, in 1876, by the U. S. Centennial Commission, the Prize Medal and Certificate of Award were given to P. Keiffer for this variety. The Committee reported as follows: "He exhibits a HYBRID PEAR OF REMARKABLE EXCELLENCE, between the common pear of cultivation and the Chinese Sand Pear, giving promise of a NEW RACE OF GREAT EXCELLENCE."

We are indebted to Mr. William Parry of Cinna-minson, N. J. for the annexed cut and description of this fine fruit.

**Address before the Solebury Farmer's Club,
OF BUCK'S COUNTY, PA.**

BY WILLIAM PARRY, OF CINNAMINSON, N. J.

PEARS.

The pear is a great favorite with cultivators of choice fruits, and in some sections is largely grown for market.

I visited an orchard lately, on which the crop of Bartlett's and Duchesse was estimated at 4000 bushels, which are now being shipped to market and bringing good prices.

A few years since I visited an orchard in the State of Delaware, containing 10,000 pear trees, eight years planted, about 3,000 of which were Bartlett's in bearing; the trees were heavily laden, some of them yielding three baskets each of large, fine fruit; and, although the markets of Philadelphia and New York were filled with peaches, the pears were sent to Boston and more distant markets, where they found a ready sale at from \$15 to \$18 per barrel, as appeared by the hills of sale returned from the commission men in Boston; up to that time the proprietor informed that he had shipped 600 barrels of Bartlett pears from his 3,000 trees, eight years planted, and was not done picking.

We frequently see native trees of large and thrifty growth, producing abundantly, which is sufficient evidence that our soil and climate are well adapted to those varieties; and in making selections for an orchard, particular regard should be had to those known to do well in the neighborhood, and not be led astray by the long list published in catalogues, with glowing descriptions, nor even by the exhibition of beautiful specimens shown at the autumnal fairs.

The ground should be in good condition, thoroughly drained, deeply tilled and well manured before planting, and high cultivation continued afterwards, which should not be entirely charged, to the pear crop, as the ground, if properly treated will yield nearly as much profit for ten or twelve years as if the pear trees were not there.

I have always obtained much better returns from land on which several crops were growing, ripening at different times in succession, than when depending on one crop alone. Young pear orchards require the same kind of treatment as vegetables and small fruits, viz: high culture and plenty of manure. There is great economy in labor and fertilizers in having both upon the same ground.

An orchard of Standard pears at thirty feet apart each way, will require 48 trees to the acre at \$8 each, a moderate estimate after 10 years of age, will amount to \$240, and before the trees arrive at that age, larger returns may be had from vegetables and small fruits grown among them. I recently visited one of the most extensive and successful cultivators in my acquaintance, who grows thousands of baskets of pears annually, and has exhibited in Philadelphia, more than three hundred at a time. It was surprising to see the great amount of vegetables and small fruits grown among the pear trees. One plot of three or four acres was planted with asparagus and pear trees, mostly Lawrence, in the following manner: There were six rows of asparagus, five feet apart; then at the same distance a row of pear trees, ten feet apart in the row; then six rows more of asparagus, and so on.

In the tree row, between the trees, are planted gooseberries, raspberries and rhubarb, completely filling up the rows. From this ground is taken annually a full crop of asparagus worth \$300 to the acre, and from one half of this plot, was sold the same year, fifty bushels of gooseberries, at \$2 per bushel.

From the pear trees so situated, with the ground occupied to the trunks of the trees with vegetables and small fruits, are taken each year a splendid crop of Lawrence pears, many of the trees bearing from three to five bushels each. In other parts of the pear orchard are grown Raspberries, planted in the same manner as the asparagus, every sixth row being a tree row. From this ground are taken four to five hundred dollars an acre, independent of the pears.

In other parts are grown strawberries, alternating with all sorts of vegetables, market truck and nursery trees. From the strawberries, five hundred dollars per acre are taken and sometimes more. In every case the tree rows are filled close

up to the trees with currants, gooseberries, raspberries, rhubarb, &c., all yielding abundant crops.

One of my neighbors planted a few years since an orchard of 10,000 Standard pear trees, which are growing finely, but not old enough yet for profit. And in order to bridge over the time required for the trees to become established, planted raspberries and blackberries in the rows of trees and between them, from which there were gathered and sold this year more than 30,000 quarts of raspberries and 13,000 quarts of blackberries, which at eight cents a quart, yielded \$3,440, from the part of the land planted with berries between the pear trees.

WHAT KINDS TO PLANT.

The proper selection of varieties is a matter of great importance, and will vary in different neighborhoods. There are about 3,000 varieties of pears now on record, described by horticulturists, one hundredth part of which are amply sufficient for all practical purposes, and for profit alone, one dozen of the best, yield more than all others combined.

At one time, I imported and planted 312 varieties of pears. It was an interesting experiment, but after the trees came into fruit it was easy to select a dozen of the best varieties with which to plant an orchard that would yield more profit than the remaining 300 on the same quantity of land. For in growing fruit for market, it is not necessary to cultivate many kinds, but rather be confined to as few as will give a succession of fruit through the season.

It is much better to have the whole quantity to market at any one time, of the best varieties ripening at that season, than to have twenty different kinds, many of which are inferior. I will name a few that have done well with me, and I think can be relied on for good results generally:

Bloodgood, Clapp's Favorite, Julienne, Bartlett, Howell, Buffum, Buerie Bosc, Belle-Lucrative, Beurre Clairgeau, Beurre d'Anjou, Doyenne Boussock, Duchesse d'Angouleme, Seckle, Sheldon, St. Michael d'Archange, Rutter, Urbanist, Lawrence, and Vicar of Winkfield.

[TO BE CONTINUED.]

TEA PLANTS.—The Department of Agriculture distributed last year 50,000 young tea plants, and will this year distribute as many more, Commissioner Le Duc is sanguine that tea can be profitably grown in our Southern States. It has stood the test of our climate at Washington for some years past, very satisfactory. We learn, the green leaves put in a cup of hot water furnishes a fragrant and refreshing drink. What a saving to the revenues of our peoples if we can grow all the tea we use!

For the Maryland Farmer.

The Vegetable Wax.

The most important article for illuminating purposes in Japan is the candle made from the fruit of the *Rhus Succedanea*; a tree about the size and appearance of the common Sumac of this country. It is grown more or less extensively almost everywhere in Japan, and especially in the western provinces, from the south northwest to the 35th degree. Specimens of this tree have been imported.

The tree has a quick growth, and attains the diameter of a foot and a half, and a height of 25 feet. They begin to yield berries the third year, but in California may bear next year after planting. The berry for introduction here is the size of a small pea, of a white color, hanging in clusters, and contains the wax, as a thick white coating of the seed. The full grown tree averages 50 pounds of seeds annually, about one-half of which is wax. It is a hardy plant, growing on indifferent soil, and living for many years. In Japan they are planted by the roadside, on embankments, and out of the way places.

The wax is obtained by the berries being crushed, steamed, and then placed in hemp bags and pressed in a wedge press. It is also obtained by boiling the bruised seeds and skimming the wax from the top. The wax is a pamatine or glyceride; when first extracted it is of a yellowish white color, and somewhat softer than beeswax. It melts at 127°, and when formed into candles give a fine clear light. In ordinary candle making the unbleached wax is used. When washed and bleached in the sun and air, it assumes a pure white color.

The vegetable wax of commerce is the imported article from Japan. From experiments made it can be readily grown in this country. The tree is highly ornamental, as well as for its production. As the foliage changes it has the peculiar bright and attractive hues so remarkable in the Autumn landscapes of the Eastern States. The wax is in great demand, and commands a good price. It is valuable for candles, making the gloss for linen, for waxing thread, and other purposes for which the ordinary wax is used. Since it may be grown so readily, its cultivation could undoubtedly be made a source of profit, and especially since the present process of extracting honey from wax will tend to lessen the supply of the ordinary article, and also leave ample room for this new industry.

HENRY LOOMIS,

San Francisco, Cal.

To Get Seed from Osage Balls.

DAVIESS COUNTY, IND., December 30, 1878.

Gather your osage balls and put them in an old box or barrel which will hold them. Let them remain there until they become rotten; then you can mash them all to pieces. Then wash the seed until clean, when they will be ready to plant as soon as dry. In preparing the ground for planting throw two furrows together; then take a large shovel-plow and make a furrow between these two furrows, and drill the osage seed along, one inch apart as near as you can. When the plants come up keep the weeds down. They will grow better this way than to sow the seed in a nursery and transplant. The seed should be sown as soon as the ground will do to work in the spring. Half a bushel of seed will plant about two hundred rods.

HOW TO KILL POKE ROOT.

In the spring, when they commence to start out of the ground, take a sharp hoe and cut the stalk off at the ground. Then take common salt and put about half a pint on a bunch. It will never start into growing any more.

TO CURE WINDGALLS ON A HORSE'S LEG.

Take two ounces of the oil of organum and four ounces of lard. Mix well and apply twice a day, rubbing the place tolerably hard with the hand.

W. F. K.

For the Maryland Farmer.

Fruit Raising in Nebraska.

Lancaster County, Nebraska, is representative of the rolling prairie, trans-Missouri. There is little difference in prairie soil, but on the rolling prairie the scenery is most diversified. There are bottoms through which the streams meander, the banks thickly fringed with trees. Back from the valleys the land rises and rolls in low hills, seldom anywhere so steep as to impede the plow. Among the hills the scene is ever changing. When the traveler looks around from the summit of a knoll, for miles he sees a landscape most diversified in outlines—broad, sweeping in its curves, and in gracefulness, that which the classic is in architecture. It was supposed that the wind of the prairie would prevent fruit growing, but the experience of Nebraska orchardists now is that the highest summits, on a northeastern exposure, are the best sites for an orchard. On two of these knolls, seven miles southeast of Lincoln, the State Capital, Mr. J. A. Bailey has a farm of 320 acres, and on the summit of one of these hills there are 80 acres in orchard. The fruit comprises apples, pears,

peaches, plumbs, cherries, grapes, gooseberries, currants, blackberries and strawberries. Mr. Bailey has been on his fruit farm nine years, and he has got his orchard into good condition, but he has won the battle without fighting it. He began his task with a capital of \$2,500, and all these years has attended to his farm and orchard work, and has followed his business as a painter in Lincoln. The reader will see therefore, that he has needed to be frugal, industrious, intelligent and persevering. What is the present result? Cherries in the market in their season and small fruit, and this year (1878) his returns from one acre of blackberries were \$300 and from his peaches, \$400. His peaches are not yet in full bearing, that is, the whole of his trees, and his apples are only this year beginning to bear, though the trees that did yield fruit this year, looked in their abundance, like a fruit tree in a realistic Japanese picture. Mr. Bailey exhibited peaches at the Nebraska State Fair, as large as peaches ought to be, well colored and luscious in flavor, and apples, Red June, Early Harvest, Tetofsky, Cooper's Early, Fall Rambo, Dutchess of Oldenburgh, Fall Jenneten, Gravenstein, Maiden's Blush, Porter, Winter Baldwin, Ben Davis, Cooper's Market, Jonathan, Northern Spy, Pomme Grise, Rawley's Janet, Rhode Island Greening, Golden Russet, Vanderlere, White Winter Pearmain, and Winesap, obtaining a premium therefor.

THE STATE TOBACCO WARE HOUSES.—The January '79 Report of Comptroller, T. J. Keating Esq., has this remarkable statement:

"The receipts of the Tobacco Warehouses are set forth in Table No. 8, and amounted during the year to \$124,032.08, and the net earning to only \$2,627.32, not enough by \$12,372.68 to pay the salaries of the Supervisor and Inspectors. These must be paid out of the General Treasury and the Tobacco Inspectors are therefore a burthen to the State notwithstanding the large amount they pay to the Warehouses. This ought not to be, and it is to be hoped, that the next Legislature will either revise or repeal the whole system."

CURE FOR BONE FELON.—One ounce asafetida in one pint vinegar, as hot as the hand can bear. Keep it hot by placing the vessel over the top of a teakettle. Use it frequently through the day, an hour at a time. A painful but effective remedy.

Farming, or any other active out-door life, tends to perfect digestion.

For the Maryland Farmer.

Plans for the Future.

At the commencement of the new year is said to be an excellent opportunity for individuals to form new resolutions; and there is no class of individuals to whom it does not apply. In the case of very many farmers, there is an absolute necessity for this, in order that they secure the very best results from their labors. While it is true that the farmer is compelled to labor in season and out of season, and is obliged to leave undone many things which ought to be done, there is often an occasion for this, the cause of which might be removed. One great trouble lies in the fact that farmers, having their attention directed to some large operations, are apt to overlook matters that appear of little consequence, but which in fact are of manifest importance. Again, although the farmer is loath to acknowledge the fact, it is too true in many instances, that having occasion to go to the post office, corner grocery or blacksmith shop, instead of returning home after the errands are done, more or less time is spent in gossiping. Now upon all occasions when the farmer is away from home, or even when he can go directly away from the farm for a little time, and can improve the mind, and especially in the line of his industry, it is time most valuably spent; but when it is spent in gossiping, telling stories of a low order, and perhaps connected with scandal, it is time worse than lost, and the farmer had far better be seated in a chair in his house doing nothing, than thus spend his time. The winter affords additional opportunity for this loss of time, unless the better rule is adopted of spending such time in devising plans for the future. In doing this it is very necessary that there should be a review of the past; the farmer should study all cases of partial failure, to discover the causes that they may be removed, or avoided, the same as the careful mariner will avoid those places which will bring disaster. As before intimated there are in the experience of every farmer many things that have an effect upon general results, but which appear so insignificant as to be overlooked, and yet they are so to speak leaks in the farm vessel as a whole. This is very much like a man who is watching with great care the bung hole of a barrel to see that none of the contents escape, while at the same time the drops are trickling from between the staves. There is nothing more important to the farmer than the saving of all fertilizing material to be returned to the soil; but because in some instances it appears insignificant it is passed by and is lost. This, then, during the long winter evenings, is a very proper time for every farmer to

make a careful review of all his operations, that he may discover where he is in the least degree failing to secure all the manureal elements that are being wasted by exposure or otherwise. If the cattle stalls are not constructed with a view to saving the fluid secretions devise ways and means for its saving by means of absorbents, as it can be largely done if the proper material be employed. Every farmer during his regular labors has brought to his attention some little things that require to be done, which would be a good convenience or saving, and yet cannot be attended to at the time; if these, as they should have been, are noted down in a memorandum book, come in for their share of consideration, and plans laid out for the accomplishment of necessary changes at the appropriate time.

Another matter effects the interest of farmers if they are growers of large fruits, and that is the proper care of fruit trees; by a very common neglect, trees are not properly pruned, and the result is that when there is fruitage, it is of an inferior character, which, as every farmer knows, is a serious obstacle to a ready sale. Then let the farmers study the necessities of the case and arrange for all such improvements as are required.

But above all things, let the farmer consider what are to be his crops for the coming season; how many acres are to be devoted to each crop, and what fields. A very important thing for every farmer to have is a correct map of his farm, or all of his land, with each sub-division carefully marked out and numbered, that he may, while planning for the future, "have every important operation designated by number of the field, and so all tabulated for future use. In this way, after a little practice, an arrangement can be made with a provision for possible contingencies, that being followed will enable all operations to be performed in their proper order, and save the annoyance that frequently results from poorly formed, or, no plans at all. Then if there is truth in the old saying that "time is money," the saving of time by the observance of duly prepared plans, is an advantage to the farmer, in that he can spend it for mental improvement, which is fully equivalent to money in placing him in a more elevated position among his fellow, men.

How many farmers are there who are willing at the commencement of this year to adopt a new departure, and thereby aid in bringing themselves and the occupation which they have chosen, up to the high position which they are destined to occupy?

WILLIAM H. YEOMANS.

Columbia Conn.

The Great International Dairy Fair.

This fair commenced on Monday, December 2, 1878, and continued through the entire week. It was largely attended and was altogether a grand success. We are indebted to that zealous friend of the dairy interest—J. H. Reall, Esq.—for much of the valuable matter which forms the substance of this brief—yet we trust sufficiently comprehensive—notice of this great International Fair. It was a novel movement, and we are glad that its projectors were rewarded for their efforts by unexpected success. As in all new movements, there were some trivial mistakes made perhaps, such as that valued old journal, the *New England Farmer*, mentions—the “exhibiting of neat stock in the same apartment with the butter and cheese.” This, however, was a small matter, and may be after all only a matter of taste. But the great end was attained—a wonderful show of butter, cheese and a multitude of dairy machinery and utensils, and proofs of late improvements from all parts of the United States and from the dairy sections of European countries. The premiums were large, and for each one there were many contestants. Among the recipients of premiums we were glad to see our esteemed correspondent, W. Crozier, Esq., of Northport, L. I., New York, received the first prize for his Ayrshire cow, “Dora,” and also first prize for “Josephine”—a Jersey cow, besides other prizes for animals in his fine dairy herd.

The fair was a great school in which much in a short time could be learned by every one who may be engaged in the dairy business or in cheese-making, or disposed to engage in creameries, or improve dairy stock, or feels any interest in this vast industry which is daily growing in importance as one of the leading features in the commerce of the world.

It was not only the material exhibition that was so striking, but the chief object seemed to be, the gathering together facts and statistics in regard to the dairy business of the world. These facts, as set forth by the different distinguished speakers on this occasion, were perfectly astonishing to thousands who never before dreamed that the dairy products had assumed such prodigious proportions. We ourselves were surprised at many facts brought to light by the speakers on this occasion. These discussions developed wonderfully encouraging facts and statistics in regard to dairying in all its branches in this country. The increased exports of cheese and butter and the increased number of cows of late years as well as their products for home consumption and foreign demand were shown to be immense.

The addresses of Gov. Seymour and Gen. B. Butler were well worthy of the occasion, and must have been gratifying to their hearers, especially those whose interest was identified with the subjects upon which they discoursed.

Gen'l Butler advanced the doctrine which must be eventually conceded is the right one—that the smaller the farms, the more land owners there are, the richer will be the country and more independent the whole people, instancing the notable example of France, whose wonderful power of recuperation from debt and disaster is alone attributable to the minute sub-division of her agricultural lands, and the consequent number of her land owners, each of whom is thereby a part-owner of the great domain and feels bound to add his mite to the liquidation of any debt that may rest upon the general territory.

But of all the speeches on the occasion, that of Mr. F. D. Moulton seemed to be the most carefully prepared and confined more closely to the actual objects had in view by those who got up this great International Convention for the promotion of the American dairy interest.

The presiding officer, David M. Stone, Esq., editor of the *New York Journal of Commerce*, during the closing exercises of the International Dairy Fair, introduced, with a few pleasant words in a happy manner, Mr. Francis D. Moulton, the orator selected to make the closing speech.

Mr. Moulton, after giving a sketch of the origin of this great fair and paying a just tribute to the prime mover and sustainer of this institution, Mr. J. H. Reall, he proceeded to discuss the fair itself, its objects, what it represents and its success.

WHAT IT REPRESENTS.

“If a few weeks ago merchants considered intelligent, in the butter and cheese trade, or other business, had been asked the extent of the dairying industry of the country, what it amounted to per annum, or what its relations were to the best interests of our people, they could not have answered satisfactorily. When the Press only a few days since, announced that the value of the land and cows in the United States, employed in furnishing milk, butter and cheese, was not less than \$1,300,000,000 and that the combined value of butter and cheese produced annually was \$350,000,000, or \$50,000,000 more than the wheat crop of the country, the public was astounded, and the International Dairy Fair at once assumed a significance that has arrested the attention of the thousands whose only conception of the dairying industry had been suggested by purchases in Washington Market, or at their grocers, of butter and cheese, by the pound or package. The figures which represent the industry signalized through this Fair are astonishing, but they have a deeper meaning than mere money value; they are only the glistening ripples on the surface of a deep river—silver ripples on the river of life.”

* * * * *

"These figures also represent a development and progress unparalleled in any other industry. They represent a change for the better in the agricultural growth of this country that will enable it to feed itself and all the world, before many years have passed, if the questions that concern this growth receive intelligent notice and discussion. Moreover, they show the improvement in quality, increase of production, and accumulation of wealth, directly resulting from the knowledge disseminated, chiefly by dairy conventions, during the past fifteen years.

* * * * *

POPULATION AND PRODUCTION.

"Although we have increased the annual production of butter from 600,000,000 of pounds to 1,500,000,000 pounds, and of cheese from 150,000,000 pounds to 350,000,000 pounds, in the last eighteen years, we find ourselves only at the threshold of our responsibilities and opportunities, for the vast population of this country must be mainly cared for by the development of its agricultural resources; and by this I do not mean merely fed and clothed, but cared for morally and intellectually, through the agency of homes owned by their occupants, and of school houses and churches."

Our space prevents giving more of this able address. We shall refer to it again, however.

Agricultural Experiments with Manures.

Messrs. Editors of Maryland Farmer:

Prof. Atwater, of Conn., having reported some agricultural experiments, I have condensed them, and now place the synopsis at your disposal.

By many well-developed trials, French experiments have demonstrated that the best results in production are obtained by the use of "perfect fertilizers," which contain five elements of plant-food. As three different chemists have taken three different views of the relative values of these important constituents on the production of a corn crop; Prof. Atwater directs his experiments to ascertain the correct view of the case. Lawes and Gilbert asserts that nitrate of Soda, with a superphosphate, produces the best results; Ville thinks phosphoric acid most essential; Prof. Stockbridge, of Massachusetts Agricultural College, claim that nitrogen is most in demand, and that phosphoric acid is least. Leaving out of consideration lime and magnesia, both less in demand than the others, he seeks to test the relative importance of nitrogen, phosphoric and potash. Selecting a "worn out" soil in lots containing, each one-seventh of an acre, the mode of trial, as reported, is this. Nothing was applied to the first plot; nitrogen, on the second; phosphoric acid, on the third; potash, on the fourth; nitrogen and phosphoric acid, on the

fifth; phosphoric acid and potash, on the sixth; nitrogen, phosphoric acid and potash, on the seventh; plaster, on the eighth; and barn-yard manure, on the ninth.

As judged by the crops, phosphoric acid was found to be most important, and that less nitrogen was required than is now used in the production of corn. He proposes to continue these experiments and hopes to reach definite conclusions, although chemical and physical peculiarities of soils must always be the chief difficulties in the way of establishing correct results.

Respectfully, J. D. WARFIELD.

The Poultry House.

For the Maryland Farmer.

The Various Breeds of Poultry, Eggs, &c.

Messrs. Editors:

As I have had many inquiries, as to relative value of various breeds of fowls, I will endeavor, now at the beginning of the season, to point out to your readers the virtues and faults of the most popular breeds, and assist as far as I am able to do so, the breeders, in making selections, which best serve to reach the desired object.

Games are all good layers, sitters, and mothers, of pure stock. The flesh usually good in young fowls, but rather two muscular in old ones. Most games are of small or medium size; chickens grow slowly, are usually very subject to disease when very young, and should be kept out of dew and exposure, when young. Light colored games are very subject to canker and roup.

Hamburgs, Golden Spangled, Silver Spangled, Golden and Silver Pencilled, are all layers of first order. Non-sitters, of small size, flesh very good, beautiful in plumage and carriage, active foragers, and usually healthy. Cochins of all colors, valuable as flesh makers, large in size, fair layers, excellent sitters, healthy, inactive, very valuable for raising young chickens for early Spring market. Eggs fine in quality and large.

Brahmas of all colors, good layers, healthy, good sitters, and rapid growers, more active than Cochins, but cannot be considered as active fowls, are very valuable for eggs and also for dressing as fowl poultry.

Plymouth Rocks may be termed the most valuable, of all fowls for farm breeding, good layers, sitters and mothers, healthy, fast growers, large in size, valuable for eggs and flesh. Houdans, good size, all fine layers of large eggs, fair flesh, good rapid growers, and handsome in appearance. Leg-horns, of all color, non-sitters, small, flesh not very

good, excellent layer. Black Spanish, medium in size, non-sitters, usually healthy, flesh poor. I will now make a few suggestions as to treatment of fowls which may be of service, and will first advise, that, instead of roosts in houses for large fowls, straw be used on the floor, and removed every week, it is the opinion of many breeders, and I have been convinced myself by losing several valuable fowls, that they often are injured by sitting on roosts, and often when very fat drop dead from narrow roosts. Now, the object in going to roosts with fowls, is to get sleep, and in these heavy fowls there must be exerted continually an effort to keep balanced on the roosts and the sleep cannot be very satisfactory or resting. I am of the opinion that in many cases these large fowls become weakened by roosting, and many of the diseases to which they are subject are due to the weakened state of the fowls; those who doubt the influence of the narrow roost on heavy fowls, have only to examine into the matter, by placing two fowls of equal size, one in a box without roost, with good straw bedding, and one that has a narrow roost, and it will be found that the one on the roost will wake at your approach, whilst the one asleep on the straw bedding will probably remain asleep until an effort is made to disturb it. The straw should be removed and burned at the lowest once every week, and fresh straw put in.

A great many young chickens are lost from running out too early in the morning, and if breeders will confine the hens in cages or coops, from which the chickens can run, and only let the hens out after eleven o'clock in the day, it will be found of great service, and will prevent many early deaths amongst the chickens,

It will be well for breeders who intend to order eggs for hatching, to be reminded, that it is best to order them early, whilst the weather is a little cool, for the reason that eggs are not often injured by cold if well packed, and are very easily injured by heat. The idea that the vitality of eggs is easily destroyed by cold is an erroneous one, and the vitality is oftenest destroyed by warm weather, and not often by cold, unless near to freezing point, excepting when they are sitting, and then the sudden change of temperature when cold often destroys the vitality when the hen leaves the nest; so I advise breeders to order their breeding fowls, if possible, so as to get them in February, and to order their eggs for setting, in March or first of April, and if you have a good hen to sit on the eggs better result can be looked for than later in the season.

W. S. TEMPLE,

47 S. Howard St.

Save the Manure.

Even by farmers, who should be the ones who would realize the value there is in it, there seems to be but an indifferent effort made to save the hen manure, for much of its value is wasted by not taking care of it properly or in time, while it is often used on such crops as are not capable of utilizing it to the greatest advantage or profit. Good hen manure from fowls which have been liberally fed, is worth as much as guano, for all kinds of crops for which guano is used, and if farmers and those who have small garden patches would only realize this fact, they would pay more attention to collecting and saving the droppings from their hens than they do. We do not think there is much necessity for cleaning the fowl house out every day, as some do, but clean it out every week, giving it a good sanding every time it is cleaned, so as to keep the floor clean from droppings and make it easier to clean out when necessary. Some sprinkle ashes, sawdust, chips, etc., on the floors, but we consider sand preferable, for it seems to separate, to disintegrate, the droppings better, soon making it by a little care in working over, almost as fine and as easily applied as guano or any of our superphosphates. We always put in into barrels as soon as it is taken up from the chicken house floor, and convey it to some dry airy place where we let it remain until wanted for use, when we empty it out on a heap and work it over well before applying it to the crops.—*Poultry Bulletin.*

Practical Experience with Fowls.

A correspondent of the *American Cultivator* says: I have paid attention to breeding fowls for thirty years, and have also paid for my knowledge; hence, if a few facts will be of service to any of our readers, you are welcome to them; and not being an adept in addressing the public, I would prefer giving my facts by numbers.

No. 1. The large breeds, to come to perfection in size, must be raised on new ground, as it appears that the bone-producing properties become exhausted by constant cropping on the same lot,

No. 2. The best layers and most thifty chickens can always be obtained by a cross between two distinct breeds, the best by large with smaller. Of course this is for quick-growing chickens for the table and early-laying pullets, but the breeding should end right here, as the progeny will soon run to poor mongrels and fade out.

No. 3. One cock is ample for a yard of fifty hens, and is far better than more. The eggs will not fail to produce chickens, while the hens will keep in

better health and plumage.

No. 4. A pure breed cannot be depended on if one hen of other blood runs in the yard, no matter if she does not lay or if the eggs can be culled out. This is positive, and owing to the fact that impregnation is carried mixed by the male from one hen to another.

No. 5. White feathers in colored fowls do not always indicate impure blood, as it will often happen that growing feathers will be pulled out or injured at moulting time and their place supplied by white ones, seeming to indicate that the coloring matter has been exhausted to supply the first growth. This is especially the case with chickens raised from fowls after long confinement.

No. 6. For winter coops, glass on the south front is a great benefit during the day, but in extra cold weather it should be covered at night, as the inside air is rapidly cooled by coming in contact with glass exposed to outside atmosphere at below zero.

No. 7. If fowls must run short of food or water, let it be food. Water they must have and it should be kept clean as possible.

No. 8. Have a shelf under the roof that droppings may be saved dry. They can be easily brushed off and put into a barrel, and sold or taken direct to the compost heap.

No. 9. Whitewash is always in order, especially on inside of coop.

No. 10. If your coops become infested with insects, the best way is to remove the fowls in the daytime (when the pests will have left the fowls and taken possession of the roosts) to some other coop for a few days. This removal alone will do good, but to make sure, fumigate with sulphur, then whitewash, put kerosene oil on the end of roosts and in cracks near, where insects may lodge in midsummer. The nests should always have a sprinkling of sulphur.

No. 11. Nests for summer use are best made from old barrels; saw one or more staves out near the middle of the side of a barrel, set the barrel on the ground, open head down. By moving occasionally it can always be kept clean. This is a good contrivance for setting hens, as the sediment will be left on the ground or floor, keeping the barrel sweet; but if there is danger of rats the whole head must be put down.

No. 12. Keeping fowls healthy is what I am best acquainted with; to care for sick ones is quite another thing, and not being able to manage the latter, I keep mine well, being fully impressed that it is the cheapest way.

History of the Maryland Agricultural and Mechanical Society.

CHAPTER VIII.

On the evening of 22nd October, 1857, the Society met at their rooms, Col. G. W. Hughes, in the chair.

"Concentrated Manures--Their value and necessity for an inspection," was the subject for discussion. Messrs. Dobbin, McHenry, King, Carey, Bowie Davis, Dr. Higgins and others, participated. Dr. Higgins being interrogated, expressed himself warmly in favor of properly prepared Poudrette as a great fertilizer, saying: "There were sources in the city in its sewerage and in the manufactories, sufficient to manufacture quantities of this article to an amount, if judiciously applied, to pay in time the State debt.

The result of this long and interesting discussion was appointment of Messrs. W. Carey, R. McHenry and Dr. Steuart, a committee to take into consideration the whole subject and report to the next quarterly meeting.

On the next evening, an election of officers was in order, Mr. C. B. Calvert again tendered his resignation but was again elected president, amid loud acclamation. The other old officers were re-elected with a few changes.

The Treasurer, Mr. Jas. McNeal, Jr., assigned his position and Mr. Lightner, was appointed in his place.

"The Treasurer stated that the gross receipts of the Society for 1849, were \$3,516.43—for 1850, \$4,607.79—and for 1851, estimated at upwards of \$7,000."

Major General Scott, U. S. Army, was formally introduced to the Society and remained some time interchanging views with the members and enjoying social conversation.

"Dr. Wharton offered a resolution that the thanks of the Society be rendered to Chauncey Brooks, and Geo. W. Dobbin, Esq., for their invaluable services in the purchase and fitting up the Show Grounds, and to Martin Goldsborough, Esq., Chief Marshal, for the satisfactory manner in which he performed the duties of his station, which was unanimously adopted.

Mr. Cary moved that Martin Goldsborough, Esq. be appointed Chief Marshal for the ensuing year, —which was concurred in.

On motion of Col. Ware, the Chief Marshalship, was made a salaried office, and the Executive Committee was authorized to determine the amount of compensation to be attached to the same.

It was at this meeting of the Society, on the last evening, that Mr. Calvert presented a plan for the establishment of an Agricultural College. So that, it was this Society under the lead of its zealous president, that originated and sustained the movement which led to the establishing of the Maryland Agricultural College.

[TO BE CONTINUED.]

THE APIARY.

For the Maryland Farmer.

KENWOOD, January 20, 1879.

There is something peculiarly fascinating to very many persons in the management of bees, and it has ever been so to the writer since boyhood days. Since the introduction of improved methods and hives which give the owner such entire control over their operations, this attraction to it, either viewed as a special pursuit, or as a relaxation from other cares and labors, is increased.

It is equally true that very many people have a mortal aversion to bees which cannot be overcome. Such should not begin, but leave the field to those who can and will properly care for them.

As these papers are written more with a view to prompt a more general utilization of one of nature's great storehouses, rather than to build up an independent industry, it will be my object to address more particularly the small farmer and cottager—be he farm hand or artisan. There are few places in our broad country where agriculture is pursued at all, the flora of which will not afford pasturage for bees.

The capacity of any region must in some degree be known by its residents.

It would be very unwise to crowd many colonies in any one locality whose vegetation is meager and bloom scarce.

From field and forest, cane brakes and morrasses, these tiny industrious insects gather nectar. There are locations so well suited to their wants that many hundreds of colonies may be profitably kept within a radius of a mile. The apiarian must learn by experience the capacity of his pasturage.

THE HIVE.

There is no necessity for buying any patent hive, nor indeed any patented article. Above all, the beginners should beware of all so-called moth proof hives and traps. Better than that would it be to be humbugged, as one honest man was, into paying ten dollars for an infallible receipt against bee moths. Though an expensive way to get a little wisdom, he got what he paid for when he read—*keep each colony strong*. That is all that is needed. The movable comb hive is the one thing needful. Its shape is not material, and there are a dozen or more different styles used by some of the best apiarians in the country but uniformity; is so desirable in each apiary, that but one style of frame ought to be made and used.

More and more of late years have bee keepers been uniting upon the *Langstroth frame* so-called, because Mr. Langstroth, after long experience,

adopted it as best in meeting all the requirements. This frame is 17 $\frac{1}{2}$ x 9 inches.

The hive in which suspend these frames may be varied in construction from a plain box, to the elaborate two story, double portico, Langstroth hive.

The writer uses one 14 $\frac{1}{2}$ inches wide, 18 $\frac{1}{2}$ inches long and 10 inches deep inside, with ends rabbitted down $\frac{3}{4}$ in. to hold the frame and with portico, and then a second story of the same size without portico, and closely fitting on the first story, and it has a movable cover for convenience. This upper story is not only used for surplus comb honey, but to obtain the largest results in liquid honey by the use of the extractor. As many readers of the *FARMER* may never have heard of or seen this machine esteemed every where by intelligent bee keepers, I will say it is a large case, usually made of tin with an interior light revolving frame, so constructed as to hold the combs either two or four, so as to balance.

The combs are uncapped rapidly with a thin flexible blade and placed within, and by a few rapid turns the honey is thrown out by centrifugal force—one side first and then the other.

A faucet at the bottom is placed to draw it out into the proper receptacles. The combs are immediately replaced in the hives and in the best seasons may be filled again in two or three days. The beginner should understand that nectar is rarely gathered in a perfected condition, being much thinner and it has to be ripened. Bees never seal over or cap immature honey. This process of ripening is not fully understood, but the internal heat of the hive contributes largely to the evaporation of the water in it. When a comb is one-half or two-thirds capped over, it is ready for the extractor. These extractors are made of various sizes to suit the different sized frames. It is for the reason that no one should require but one size of an extractor, as well as the necessity of interchanging frames among the hives in manipulating them, that uniformity of hives is so strongly enjoined.

Comb honey in nearly all the markets brings a more remunerative price than liquid honey, but even those who make most comb honey have to use the extractor more or less. I would advise any one having five or more colonies in frame hives to have an extractor, and an uncapping knife. No bee houses or sheds are necessary. Indeed they are better off in our climate without them, and is much easier to manipulate them out of doors, each hive separate. Many recommend placing them on the ground; the writer prefers firmly set posts one foot above the ground with cross cleats both ways, flush with the top, to set the hives upon. This

saves much stooping over, and enables us to guard against mice, ants and roaches. Instead of the honey board on top, a piece of stout drilling or canvas is preferred by many to closely fit on top of frames. Two thicknesses are better still and a thin layer of cotton batting between, makes a cover that is very valuable in cold spring days and nights. If the one thickness be used, in cold weather an addition must be made of quilts or a bag of chaff. As in very hot weather some protection is needed, a movable cover large enough to project over all sides, made of light boards or shingles, is recommended as a shield from sun and rain.

In my next letter I will give my views as to the management and the use of the division board and surplus honey management.

J. W. PORTER.

OUR LETTER BOX.

SOUTH RIVER, MD.

Messrs. Editors:

Will you or some of your readers please inform me in the next number of your excellent magazine, how to make a frame bee-hive, that is not covered by a patent right, and is easy to make. Also, how to transfer bees from an old fashioned cap hive into a frame hive. By compliance you will greatly oblige us, Truly,

W. L.

[Note by EDS.—Our friend will learn by reference to the MARYLAND FARMER for 1878 all he wishes to know, in the articles of M. Paul Viallon, on "Bees and Honey in the South," which we copied monthly from *Our Home Journal* of New Orleans. It is an exhaustive treatise. We are not aware of any of the best box or frame hives now in use, the patents for which have not expired. We shall be glad to have our correspondent answered by some of our bee keepers. Perhaps our correspondent, T. W. Porter, Esq., of Va., will give us his answers to these enquiries.]

The following kind and amusing letter from a young friend in Texas, Baltimore County, came too late for insertion at the time it was most appropriate, but we now give it, to show how desirous we are to encourage young folks to write for our Letter Box, and take an interest in the MARYLAND FARMER:

"My Dear Col. Bowie, we are again brought by the epoch marked by this date, to the knowledge that another year, of this world's existence, since the Christian Era first dawned upon us—has become of the dead past—to be recalled only in memory.

It is a period too, from time-honored custom, for kindly congratulations, and good wishes from one to another,—a day for thanksgiving as well as merrymaking, when the one seems not to conflict with the other. It is a day alike welcomed merrily by the old and the young, the grave and the gay, the rich and the poor, indeed, every one joins jovially in its festivities. Now this is the time and the means your humble correspondent has selected to convey to his friend Col. Bowie, heartfelt wishes for his health, enjoyment and general prosperity, and express the hope he may live to enjoy many recurrences of this Universal Christian Anniversary.

One word about myself Col., I am young, and whatever honors, political or social, I may have enjoyed, I can truly say were "thrust upon me" and none were of my own seeking. It is true, I have never yet represented my State in the U. S. Senate, and never have I sought a re-election to Congress and yet the ambition of youth is fired by being told that the humblest boy in America might sometime become President of the United States, if he starts right and in time, and holds on to his onward course. This looking ahead my dear Col., is what lexicographers may style hope and *disappointed hope* frequently results disastrously and believe me the simple *writing* of the fact in the foregoing paragraph, has even at the present thermometrical figures (2 and 3 degrees below zero) cause me to *perspire*, and if it should *transpire* that such an ultimatum should be my lot through the *conspiracy* of others, I, like Horace Greely—tho' from the reverse reason—would *ex-pire* with joy. If such ever be my fate I fear you would then be tempted to embody this boyish epistle in my obituary. Again wishing you a Merry Christmas and a Happy New Year. I am truly your young friend.

T. J. O'C.

December 28th, 1878.

WINTER FEEDING.—The *American Poultry Journal* says: "In summer the fowls require food which will not cause the production of much fat, while in winter they require food of a more heating nature to successfully resist the cold, although it should be given not too liberally, or else they will become too fat; and the food should be changed at regular intervals to obtain the best results. During the winter months it will be found to be a good plan to warm the grain and other food before feeding it, and not letting the fowls run out in the morn before the weather has become warm. This latter is very necessary with Leghorns and other large-combed birds. A supply of meat scraps, or a mush made of corn meal with a fair proportion of finely chopped meat, should be given during winter, to supply the absence of bugs, worms, and hoppers, which the summer affords."

LADIES DEPARTMENT.

Chats with the Ladies for February.

BY PATUXENT PLANTER.

UNDER THE SNOW.

"Ah! me, my garden lies under the snow.

The shrouding, drifting snow;

Each flower that I reared has bowed its head;

Its sweet bloom withered, its fragrance fled;

I so loved them living, and mourn them dead!

Dead under this winter snow;

Lying beneath it, still and low;

Dead! and I loved them so!

But the sun, by and by, will melt the snow.

The glittering shroud of snow.

And the beautiful bud and the stately tree

Will shed their fragrance again for me.

And my heart shall be glad when my eyes shall see

My treasures from under the snow.

That my yearning love hath cherished so.

Raise fair in the summer glow.

God's garden lies under the shrouding snow.

The beautiful, sheltering snow;

And the buds that he took from your hand and mine

Are but waiting the time when His voice divine,

Shall bid His sun on the garden shine.

And warm to life in its glow

The precious germs lying under the snow.

That he took when we loved them so!"

For years past we have not had such cold weather—so much snow and ice—continuing so long and furnishing so good sleighing, as we have had this winter in Maryland and in the South. It is to be hoped our ladies have enjoyed this cold, healthy spell, in out-door exercises. Whether the exercise be walking, riding on horse-back, sleighing or skating, in cold clear weather it gives that buoyancy to the spirits, that rich glow to the complexion, that greater brilliancy to the eye, and to "the nerves, that firmness and temper, indicative of the perfect health, so indispensable to the highest order of beauty." A young girl is never more graceful, never looks more captivating than when skating with ease and skill, or seeming to be perfectly at home on the back of a spirited steed.

In accordance with my promise, I will try and give you the best description I can, though I have not the ability to give even so poor a picture as to do half justice to the wonderful Homestead of Mr. W. E. Baker, of Sewing Machine fame, Ridge Hill Farms, situated on the St. Charles River, near Wellesley, Mass. This splendid estate extends

along the river four and a half miles, with a breadth of territory from half a mile to two miles. The whole is watered by small streams, that traverse through it and empty into the Charles River some 15 or 20 miles from Boston. These several streams and the waters of the river have been utilized with great skill and taste by scientific engineers and landscape gardeners, in forming canals, lakes and fountains; connected through tunnels in some places, and so meandered about, as to form very small and a few very large islands. These waters are bordered by high hills here and level grass lawns there, large over-hanging forest trees, and a wilderness of low growing shrubbery, as we find the natural forests sometimes along our rivers, and anon you see beautiful evergreens of great size, cleared and free from all undergrowth. On all these islands are buildings or tenements of some some sort, illustrative of some church or castle, or cabin of historic notoriety—some are left in a wild state of nature, others are kept in perfect order with a multitude of flowers growing to the water's edge, and rare trees scattered here and there or in groves.

The architecture of different ages and nations are represented by these untenanted structures. There are rustic bridges, bridges of solid masonry, and bridges of curious design, parts of which are composed of stones, which have a history for each, the same may be said of columns standing about these extensive grounds, one from this and another from that great building or celebrated structure, destroyed by the great Boston fire of some years ago. Some of these blocks of stone or marble, at great cost, has been brought from far countries as mementoes of remarkable events, or commemorative of a private building or public work destroyed by fire, earthquake, the fury of war, or the destruction which attended some violent revolutionary outbreak. Without exaggeration, these stones, pillars, arches and broken shafts, are so many indexes to the historic lore of the world,—“Acts, that roar so loud and thunder in the index,” as Shakespeare says.

The drives, around and through these grounds are kept like the best gravelled walks—the turf is smooth, and flower beds innumerable and of every shape, here and there interspersed with beautiful statuary, ornamental shade trees, rustic seats and arbors, and aviaries filled with rare and bright plumaged birds—feeding on the ground or flying among the branches of stout trees enclosed in these wire-constructed houses—altogether the ground just around the unpretentious dwelling recalls to mind Calpyso's Isle as we loved to read about when in boyhood days we gloated over Telemachus,

In passing to the stables where are kept several superior riding and driving horses in stalls or apartments in a large lofty room, that was as clean and well kept as ordinary sitting rooms, we were surprised to see men planting trees in full leaf (September the 6th) in a line, some thirty had recently been planted and seemed to all appearance as if they had grown there, so fresh and vigorous they were. These trees were forest trees, from 15 to 30 feet high, and none less than 6 to 8 inches in diameter just above the ground. This process required skill and proper machinery, and I was told that rarely a tree died or failed to grow vigorously. They were not guided by ropes or wire, but after being placed with the great ball of earth, which attached to the roots when taken up and they were adjusted and fresh rich earth rammed around them; a quantity of large and small stones were laid two or three feet deep around them to as great a distance as the roots extended. These stones kept the tree in place firmly and acted as a mulch, until the trees had fully rooted. Over these rocks considerable water was thrown daily until the tree began to grow; after a proper time these stones were removed and the ground sodded. The stable is a fine building, connected at one end with large halls and rooms for museums, Chinese collections, &c., and where surprises meet you at every step.

In the centre of this building, the tall Norino Tower rises to a considerable height, from the top of which, a splendid view for miles around is to be had, and by aid of a good glass, Boston and a number of intervening celebrated public institutions can be seen. Among other surprises in this building is a large, well appointed table spread with a snowy cloth, napkins, sparkling glasses, floral decorations of fresh flowers, substantial dishes of meats, vegetables and all the delicacies of the season, each article in its perfection of the culinary art as to the right condition, color and appetizing looks, which a successfully gotten up dinner should present—silver pitchers and decanters filled with the different colored wines and other drinks. A table that would make an anchorite's mouth water and delightful to behold by the tired, thirsty and hungry guest, who is warmly invited to lay aside his hat and wraps and enjoy himself. While he is making these preparations, a neatly attired pretty young girl removes the gauzy-illusion-coverlet, that had been spread above this feast to keep off the envious flies, and he draws a large, luxurious arm-chair to the table. But consternation! every article,—the ham, potatoes, fish, tomatoes, beans, &c., each and all are hard as stone!—deceptive imitations!—made from some peculiar material

and fashioned and colored to the most delicate shadings so as to represent, to the greatest perfection, each thing as though fresh from the kitchen. It was, in my then state of appetite, enough to make a preacher swear—I—well, I did not *bless*, nor laugh. I only looked amazed, or like an old fool. But, I made Mr. Baker suffer for this trick, when I sat at his family dinner table, presided over by his accomplished and hospitable lady. Though I was unexpected and the only guest, the dinner was luxurious, the lemonade the best I ever drank and the wines superb.

There are winding walks amid the woods and through sequestered coverts and gades, where the stroller suddenly comes upon mules, horses and wild beasts stuffed and prepared by the taxidermist, quite natural, and some very startling for the moment—nearly each animal has its history or some anecdote concerning it. One horse 20 hands high, the tallest horse ever known, bred in Kentucky years ago. This animal is mounted by a gigantic figure representing a man—like the figures in clothing stores. In an out of the way place is a strong high iron pen paved with bricks and a sort of cave attached to it, where there are live bears, two of which are very rare from Florida. These bears are lively and amuse themselves and visitors by climbing a tall pole planted in the centre of their enclosure. At another place he has quite a menagerie of wild animals and birds of prey.

On one of the beautiful lakes he has a pretty little steam-boat for steaming about on the lake, and so constructed as to be, at will, converted into a rail-way car, and from the water glides upon a tram-way, which runs from the water on the island adjacent. It is a wonder.

I must reserve for another time to tell other sights I saw in this domain of fairy land and home of amusing and startling surprises.

For the Maryland Farmer.

"The Beautiful Snow."

The white crystalline snow! What can exceed its loveliness? It comes flake by flake, wafted slowly down from the passing cloud above us, and silently gathering flake by flake at last the earth is wrap'd in its great white robe. Pure, white, and beautiful! every twig and bush laden with its feathery covering, nothing to soil its purity, everything is dazzling, the eye only rests on "The beautiful snow." The lofty trees bend their heads beneath their burden, and their low spreading branches sweep the ground, while dull-tinted evergreens are just peeping out here and there. "It has woven a wreath in the hair of the splintered

stump; and chielled fair capitals upon rude gateposts; crowned tall chimneys with layers of marble; veneered rough walls with ivory; made soft pillows and spotless shrouds for old dead trees; wrought fair cornices for rough cabins; clothed with ermine unsheltered beasts,—and wrought fantastic shapes around every corner." All nature seems transformed and idealized.

"We look upon a world unknown,
On nothing we can call our own;
Around the glist'ning wonder bent,
The blue walls of the firmament;
No cloud above, no earth below,
A firmament of sky and snow."

"Elementary in its origin, it continues its elementary work" and protects what it seems to destroy. It wages a war with frost in behalf of the tender plants, and they are never so safe as when folded in its white embrace. "The beautiful snow" teaches us many a lesson. If our lives were as pure and unsullied, our influence and our example as surely and silently felt, our protection extended to the weak and suffering ones around us, and if, over all things, we spread the true mantle of charity, how changed all the world would seem? The humblest work would become a high and holy service; the hardest cross would change to a light and easy burden; difficulties would vanish, and troubles prove blessings in disguise; we would try every day to make some one better and happier, and though clouds and tempests obscure the sky of life our daily prayer would be, to be 'kept unspotted from the world,' and made "whiter than snow."

WICOMICO.

Salisbury, Jan. 22.

For the Maryland Farmer.

The Brothers—"North and South."

BY R. QUINCY HALL.

Brother North—the message came—your brothers South are dying.

That worst of foes—"Old Yellow Jack"—through all our land is flying;

"Oh! will you not assist us," the "Howards" bravely ask,

If not, why then we perish, we can't perform the task.

From Maine to California, from all the East and West,

Each brother-State assistance sent to check the fearful pest;

Memphis, Shreveport and Grenada, through all the country 'round,

"Old Yellow Jack" was stationed—it was his battle ground.

We bravely met the enemy—our loss was very great,

Some twenty thousand kindred souls have gone to meet their fate;

But now the battle's over, and the South with swelling-heart,

Thanks brothers North, East, West, and prays "they never more may part."

The brothers South, their gratitude, in words cannot express,

For aid received from foreign friends in the hours of their distress;

And should those foreign friends e'er meet our fatal foe,

The brothers—North, South, East and West—their gratitude will show.

A few years back, these brother-States, lost many noble sons,

Not by their foe—"Old Yellow Jack,"—but by each other's guns;

But now, they are united—united may they be In peace—in war—in sickness—and in eternity.

Baltimore, January, 1879.

THE WASHINGTON D. C. POULTRY SHOW, last month was a great success. We shall speak of it next month more fully. We can now only say Editor of the Fanciers' Journal—Mr H. Whitman received the following premiums:

Carriers, Black Cock	1st, premium.
" " Hen	1st "
Barbs " Cock	1st "
Trumpeters " Russian pair	2nd premium.
Yellow Magpies,	2nd premium,
Archagels	2nd "
Blue Antwerps	2nd "
Blue Checkered Antwerps	1st premium

IN MEMORIAM OF COL. ED. WILKINS.—We have been kindly furnished by W. B. Sands, Esq., Secretary of the Maryland Horticultural Society, with the following copy of the proceedings of the Society:

"At a meeting, on the 5th instant of the Executive Committee of the Maryland Horticultural Society, the death of Col. Edward Wilkins, a Vice-President and one of the most useful members of the Society having been announced, it was voted that it is proper to place on record and make public an expression of the deep sorrow occasioned by the loss of a citizen of the State, who has done so much to foster and elevate Horticulture and Pomology, and whose active and disinterested efforts to promote the success of this Society always merited our gratitude and acknowledgement.

The National Agricultural Congress.

As noticed elsewhere in our columns for this month, the National Agricultural Congress will hold its next semi-annual meeting in Nashville, Tenn., on the 25th of February. This great Institution, was started in the South, by a convention of agriculturists, called together for consultation as to the wants and the proper remedies to ameliorate the greatly depressed condition of agriculture. The results of these meetings were so marked, that the North and West soon joined in the movement, and thus the Nat. Congress of Farmers was inaugurated and has since held semi-annual sessions in the West, North and South, and at Washington City. Each congress has shown an increase in the attendance, and in the interest felt in the movement—Learned scientists, statesmen, practical Farmers of intelligence and sound experience, meet together and interchange views, essays and statistics in regard to all things directly or remotely connected with agricultural pursuits. A vast fund of useful knowledge is amassed at each meeting—This congress is doing a great work, in aid of the prosperity of agriculturists, and should be encouraged by large attendance of delegates from various parts of the whole country.

The association particularly invite the attendance of agricultural editors, officers of Agl. Societies, Boards of agriculture, Delegates from Agricultural Colleges, Granges, Farmers Clubs and other organizations, intended to promote the intelligence and welfare of the agricultural classes.

The officers are, Thos. P. Janes, President, Atlanta, Ga. Jonathan Periam, Secretary, Chicago, Ill., Ezra Whitman, Treasurer, Baltimore, Md.

J. J. TURNER & CO.

We take pleasure in calling attention to the advertisement of the well know firm whose name heads this notice. More than fifty years ago Joshua Turner, the father of the senior member of the present firm, built the house, 42 W. Pratt St., which is still and has always been the office of the firm. More than twenty years ago the firm introduced to the farmer their special brand of "EXCELSIOR," which has ever since maintained its position in the foremost ranks of reliable fertilizers. Turner's "Excelsior" has become a household word with the farmers and planters of the Middle and Southern States.

Mr. L. J. Warren, Baltimore, is the agent for sale of LEES PREPARED AGRICULTURAL LIME, for wheat, clover and other grasses. This preparation of lime is becoming very popular and much sought after by persons who wish to furnish proper plant food for their grain and grass crops, and at same time give permanent fertility to the soil. It is only \$15 per ton.

CATALOGUES RECEIVED.

VICKS' FLORAL GUIDE, for 1879, is received and is all that can be expected. It is an elegantly illustrated 100 page book, is full of useful instruction as to growing of flowers and vegetables, the prices and names of the various seeds and plants that will be furnished; nearly 500 wood cuts and one colored engraving of a variety of lovely lilies, all for the pittance of 5 cents. The lily picture is worth 5 cents, and no one can send an order for seeds, whether for a large or small amount, who will not be repaid ten or a hundred fold by the outlay if the instructions contained in this valuable book are followed out.

From Peter Henderson & Co., New York, their elegant catalogue for 1879, of flowers and vegetables, profusely illustrated and full of valuable information. It is embellished with two colored prints, one of the best sorts of celery, radish and lettuce, the other of a very rare striped tea rose. This catalogue is in fact, a book of 175 pages.

From James T. H. Gregory, Marblehead, Mass., catalogue of vegetable and flower seeds, with a list of remarkable new varieties. Mr. Gregory is one of the oldest and most reliable seedsmen in the United States.

PUBLICATIONS RECEIVED.

From Messrs. G.W. Newhall & Co., Cincinnati, Ohio. Three pieces of music we can vouch for as well worth the cost.

"May all go with the Tide,"

"Come Unto Me."

"The Old Fashioned Fire Place."

CHEMICAL FARMING; its possibilities and mistakes. By Conrad Wilson. Price, 25 cents. We have not had time to examine it, but its author is a well-known writer of ability and judgment.

THE SECOND ANNUAL REPORT OF THE COMMISSIONER OF AGRICULTURE OF VIRGINIA. Our thanks are due to the able author for this valuable report, and shall do ourselves the pleasure to notice it more fully, and extract from it, in future numbers.

One of the most beautifully gotten up books we have ever seen, is the book of the Rev. Mr. Loomis, of San Francisco, on the DYOSPYROS KAKI or JAPAN PERSIMMON, illustrated with 10 large chromos, representing the different kinds of this luscious fruit, in exact color and size. Price \$2. Every one interested in this fruit should have a copy, and others who may desire to purchase some of the trees ought to secure a copy. It is a handsome parlor ornament. The prints are superb.

THE ANNUAL ALMANAC OF THE PHRENOLOGICAL AND HEALTH JOURNAL.—Highly illustrated with scenes and portraits of distinguished gentlemen and ladies; among others a portrait of Mrs. Phelps, the distinguished Maryland Female Educator and Authoress.

THE BALTIMORE SUN ALMANAC for 1879. This is the *ne plus ultra* of almanacs this year. It is truly a mine from which every class of people can draw readily valuable information, and obtain reliable statistics upon most subjects. It is of itself worth a year's subscription to that capital family paper, *The Weekly Sun*.

TALKS ON MANURES.—By Harris, published by Orange Judd & Co., N. Y. This is decidedly the best, plainest and most comprehensive book on the whole subject of manures, for the use of practical farmers that we have yet seen. We commend it heartily to all who desire information in regard to animal, artificial and mineral manures, conveyed in a familiar "talk," by so experienced and practical farmer as Mr. Harris, the popular author of "Walks and Talks on the Farm."

HOW TO DESTROY INSECTS is the title of a very useful little work, prepared by Henry T. Williams. Its table of contents is, in itself, a catalogue of nearly all the insects pests which afflict either plant or human life; and for each of these its pages record some usually simple, and effective remedy. Horticulturists and housekeepers will be greatly interested in its perusal—Price, 30 cents. Henry T. Williams. For sale by Beach & Son, No. 7 Barklay street.

THE ILLUSTRATED ANNUAL REPORT OF RURAL AFFAIRS for 1879. Luther Tucker & Son, Albany. This is another of those useful and highly illustrated little books, published by the Editors of the *Country Gentleman*, and prepared by that eminently practical author, J. J. Thomas, for the past quarter of a century. The present issue is equal if not better than any one preceeding. The whole twenty-five numbers form the best agricultural Encyclopedia that can be had for the same money. We would urge every young farmer to secure a full sett. The price is 30 cents, each number, per year, and ridiculously low for the mass of useful knowledge furnished.

A TREATISE ON THE HORSE AND HIS DISEASES. Dr. B. J. Kendall, of Enosburgh Falls, Vermont, is a book that every owner of a horse should have, and no breeder of horses can afford to do without. It has thirty-five engravings, illustrating positions assumed by sick horses, and gives treatment of diseases in such plain and comprehensive language, as to be readily understood by any one of ordinary intelligence. The price is only 25 cents, but we would not exchange it for any book on the horse and his diseases that we have ever seen, and we have read some books of the kind that cost \$10. It contains a large number of recipes, any one of which is worth double the price of the work. The book may be had of the author as above.

NEW ADVERTISEMENTS.

Ellwanger & Barry, Roses.
 Ellwanger & Barry, Trees.
 John S. Reese & Co. Fertilizers.
 John M. Rhodes & Co., Fertilizers.
 John B. Russell, Orchilla Guano.
 Cromwell & Congdon, Nursery Plants, &c.
 Taffe & Owens, a new Agl. Implement House.
 Lawrence & Taylor, Commission House, London England.
 Hugh Bolton & Co., Paints—an old and long established house.
 C. B. Rogers, Seed house.
 A. M. Fulford, Improved breeds of hogs.
 S. W. Ficklin, Improved Stock.
 John Saul, Plants and flowers. Mr. S. is the well known Florist of Washington City.
 C. A. Cook & Co., Guide book for immigrants to Kansas
 E. D. Hallock, Seed Drill.
 R. W. L. Rasin & Co., Fertilizers. This long established and extensive manufacturing fertilizer-company, because of its reliability, deserves all the patronage it receives,
 Slingsluff & Co., Fertilizers and Acids. This is also a large and highly reliable company.
 E. B. Whitman, British Mixture.
 E. Whitman, Sons & Co., New Seeds and Implements, are offered by this popular house.
 Noah Walker & Co., the well known Clothing store
 R. J. Baker & Co., Fertilizers—an old established house.

List of New Patents in which agriculturists are interested, prepared for the *MARYLAND FARMER* by E. W. Johnson & Co., 23 South Street, Baltimore.

James M. Hall, Cotton and Corn Planters.
 L. D. Minnick, Mowing Machines.
 Saxton C. Shoup, Farm Gates.
 L. Turner, Fence Posts.
 John Weichhart, Lawn Rake.
 T. Galloway and John Larsue, Combined Broad Cast Seeder, Cultivator and Grain Drill.
 J. P. Morrill, Axe Handle Attachment.
 Mathew Smith, Cultivator.
 R. L. Squires and F. Kaiser, Bailing Presses.
 P. B. Thaxton, Road Scrapers.

Any person wishing a copy of either of these Patents, with the descriptions, &c., by sending \$1 to the office of the *MARYLAND FARMER*, will be supplied.

Chew Jackson's Best Sweet Navy Tobacco,

THE AMERICAN FARMER.—On account of sickness we were unable to mail the MD. FARMER on the first of this month, and this moment have received a copy of the American Farmer, containing so much personal abuse and deceptious slang against the Editors of the MARYLAND FARMER, that although it is below our contempt, yet we feel it due to our readers, we should take some notice of it, although we know there is not an unprejudiced gentleman in all Maryland and in the South who will not condemn this vilifier of us and our Journal, and who will not scorn his malicious attempt to make public the *private affairs of its publisher*.

All this wrath of S. Sands it would seem has been caused by the republication in the MD. FARMER of what "W. W. Bowie, alias "P. P." wrote for the Gazette in 1848, exposing a part of the Prize Essay as a *plagiarism*. It was not then denied, nor is it denied now. The American Farmer avoids the plain issue. The plagiarism stands out in bold relief and all the scraping up of old letters and dodging around the fact, cannot obliterate it.

Mr. Sands offers testimony to show that Mr. Stabler was as competent to write an Essay, as the man whose thoughts he borrowed without credit, and who was sleeping in his grave. He quotes from a letter of W. W. W. Bowie, to show that he (B) considered Mr. Stabler a *leader*—a very efficient teacher of agriculture, and that after writing complimentary letters and getting a mass of useful information, he then made his "weak and profitless attack." Mr. B. admits that he gave Mr. Stabler full credit for his great aid to agricultural progress, but at the time he was not aware that a man of such repute would be guilty of plagiarism. He might not have exposed it, had it been committed by an obscure person, but it was not to be overlooked when it was done by a *leader*, in the words of Shakespeare:

"To say the truth, the fact was infamous,
And ill beseeeming any common man,
Much more a knight, a captain or a *leader*

The editor of the American Farmer is reckless in his assertion, that we have twice repeated "That the committee on Awards would not have given Mr. Stabler the first prize for his Essay had they known of the *correspondence* between some parts of it and the one of Thomas

Moore, given to the public a half century previously." What we did say was this: "Had the committee known of the fact which P. P. published in the Marlboro' Gazette, they would not in *all probability* have given Mr. Stabler the *first premium*." The reader will see how veracious the Editor of the American Farmer is in quotation, and how *mildly* he converts "fact" (*plagiarism*) into "*correspondence* between some parts" of the two Essays.

As to what a man wrote to Mr. Stabler at the time about "disappointed and the carpers growling and barking," we have no means of knowing whether such a letter was written or not, as it has never been seen by us heretofore in print, we suppose he had weight with Mr. S. for he took the advice "to take no notice of them"—who beside P. P., the writer included in "them." we cannot tell. There must have been others beside P. P. who were 'disappointed' and carped at the "correspondence in some parts" of Mr. Stabler's Essay, and that of Thomas Moore. But enough of this unpardonable matter, a charge was made 30 years ago and not denied then. The same Essay has again appeared with a grand flourish of trumpets and the same charge has been repeated by the same party. It is not denied, but the resurrectionist of the Essay, pours out a torrent of abusive innuendoes and scurrilous personalities.

This boastful Editor goes on to say: We sold the American Farmer "for \$14,000, repurchasing it in 1871 at a figure much less." There is deception and meanness sufficient in this one line, for comments to occupy a volume twice the size of the American Farmer. Now, why did he not give the date of his sale, and why did he not state the amount he paid for it on its repurchase? He leaves the reader to suppose that the "figure much less" than \$14,000, was some thousands of dollars, when in fact it was not over \$5. or some nominal sum judging from what it was offered us, and from what Mr. Sands himself intimated to us at the time. The value of the American Farmer was certainly at a low ebb, lower than the Maryland Farmer ever has been.

We have not the time to enter fully upon the particulars of this sale and re-purchase, but as soon as this grasping old man, pocketed the \$14,000, for the sale of the *title and good*

will, &c., of this wonderfully successful Journal, he started a paper in opposition, and vented his spleen against this American Farmer, which he had sold at such a high price, with as much gusto as he now pours his venom against the Maryland Farmer. This course of unkindness was pursued by Mr. Sands until both papers, — his Rural Register and the American Farmer were extinct.

He boasts of a "competency ample for our (his) maintenance— We never denied it—The \$14,000 for the American Farmer and his large profits made from sales of guano to Southern planters, whom afterwards he would have seen exterminated because they dared to differ from his views,—was no doubt a "competence ample". But with all his pecuniary competence, he had not the generosity to assist in the least degree his nephew, who after his imprisonment in Fort McHenry for his boldness of speech in defense of what he believed the true cause of the South, and that nephew, the late Col. S. S. Mills, honored in life, and leaving a memory embalmed in the affections of the public.—one too who had served him faithfully for years. It was to aid this gallant son of Baltimore, who was in extreme distress at the time, that the publisher of the Maryland Farmer entered into arrangements with Col. Mills to publish an Agricultural Journal. This estimable gentleman was thus relieved from his embarrassment, and without any aid from the opulent uncle, whose fortune he had been for years instrumental in building up.

This man who boasts of ample competence, displays his christian charity by gloating over the misfortunes of others. A generous public will uphold every honest, struggling, unfortunate man, while they will condemn the man who boasts of his ill-gotten hoards, who has a soul so contracted, as not to have looked with pity upon the distresses of a noble relative, who had served him faithfully for years.

If "the dimmed vision of 'garrulous old age' can perceive, no grounds of envy or discontent," why does he take so much trouble to try and spy into our private business, and employ a sneak to get the weight of our mail? This is too contemptible to allude to, but for laughter—This sneaky informer pretends he knows of one batch or load of papers, that weighed 260 lbs., and makes his report, He

did not know that we send the Maryland Farmer at separate intervals, and that the papers distributed and sold at the office, and put in circulation during each month, distinct from regular subscribers, equal perhaps as many as the American Farmer mails monthly.

It is unnecessary to report that the Maryland Farmer has increased in its prosperity greatly within the past 12 months. Facts speak for themselves. In August 1877 our advertisers occupied 22 pages, and in August 1878, 50 pages. Thus our advertising sheets were more than double in 12 months.

In January 1879 we had 37 pages of ads, and the American Farmer had 17 pages. So we had more than double the number of pages of advertisements, that this vicariously old American Farmer had. This is some evidence of popularity, even when the would be autocrat of American Journalists proclaims his seniority of all other agricultural Journals in the country.

We desire to say that the rude attacks of this old man, has not ruffled us in the least. We pity his irritation at our success in the management of our Journal—it is natural perhaps to men who see their power on the wane. We are charitable enough to excuse to a great extent these ebullitions of age, but would advise him not to continue the practice of loud abuse of his neighbors and "*old friends*" in the street cars, to the annoyance of passengers. Keep cool "*old friend*" and take a dose or so of the Winslow Soothing Syrup, you think so comforting to children, remembering there is such a thing as *second childishness*. Your nerves may be soothed by this child comforting remedy.

Seriously, we say, by reference to the respective journals—both of which can be seen at our office—the advertisements in the MARYLAND FARMER is nearly three times greater than in the American Farmer, and the subscription list, it is fair to presume, is in like proportion. Our receipts for January 1879 are double those of any former month, which is, we repeat, "*MOST GRATIFYING!*" to the Editor and Publisher.

We do not wish to inflict upon our friends anything more about this controversy, but if again rudely attacked, we shall be always ready to meet the issue, at the same time endeavoring to maintain that dignity and high tone which has ever characterized our Journal.

Our Prospectus for 1879.

THE RECENT GREAT SUCCESS OF THE MARYLAND FARMER

(THE OLDEST CONTINUOUSLY PUBLISHED AGRICULTURAL MAGAZINE IN MARYLAND OR THE SOUTH.)

A Monthly Magazine Devoted to Agriculture, Horticulture and Rural Economy, including Farming, Stock Breeding, Pomology, the Garden and Floriculture, Apiary, Dairy and Household Affairs.

EZRA WHITMAN,

Editor and Proprietor.

W. W. W. BOWIE,

Associate Editor.

OFFICE, No. 141 W. PRATT STREET,
BALTIMORE. MD.

OUR SUCCESS ENABLES US TO OFFER THE FOLLOWING LOW

TERMS:

One Copy, one year, in advance, reduced to	\$ 1 00
Club Rates, 6 copies, one year, in advance, reduced to	5 00
“ “ 20 “ “ “ “ “ “	15 00
“ “ 50 “ “ “ “ “ “	35 00
“ “ 100 “ “ “ “ “ “	50 00

Subscription price for One Year, if not paid in advance, will be at old rate \$1 50 per year, and positively no deduction.

Special Premiums to Farmers,

Who may Canvass for New Subscribers,

Any person who sends us One Hundred Subscribers at \$1 00 each, will receive 1 YOUNG AMERICA CORN AND COB MILL, worth \$40 00
For Two Hundred Subscribers at \$1 00 each, we will give a Two Horse Iron Axle Whitewater Wagon. . . . value \$100 00

THESE ARTICLES WE WARRANT TO BE FIRST-CLASS.

We feel sure that these liberal inducements will secure the efforts of many who are disposed to energetic enterprises, and perhaps, out of employment, or if in business to spend a few days of recreation in thus adding to their earnings, and at the same time benefiting the public by spreading the light of Agricultural knowledge.

It will not be necessary to secure the subscribers all at one time, for instance. If any one wants to get the wagon we offer for 200 new subscribers, he can send the names in any number he secures, and will allow him a whole year to finish his club.